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ABSTRACT

This document is intended to serve as a planning tool for public service education, and is to be used jointly by community colleges and public agencies (local, state, and federal). With the growing need for well qualified personnel at mid-entry or paraprofessional levels, agencies are abandoning their internal training programs in favor of cooperative programs with community colleges. The training consists of in-service or pre-employment education, the latter composed of career categories either identical with the private employment sector or unique to the public sector. The basic public service career families are in: community development; educational, human, and judicial services; public finance; resource management; and transportation. Government programs in the Department of Housing and Urban Development or Department of H.E.W., for example, enable community colleges to be extensively involved in community affairs. Challenges to be considered are: identification of distinct career families; need for data; improvement of student services; faculty shortage; and hurdles in government hiring practices. Public service education is analyzed; examples of organization and administration of career education are offered. Suggested curriculum patterns are presented for air traffic controller, child care, corrections, fire science, law enforcement, recreation, teacher aide, traffic engineer, pollution, library technology, and urban planning technology. (CA)

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GOVERNMENT CAREERS AND THE COMMUNITY COLLEGE

By

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Washington, D.C. 20036

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Contents

PREFACE 2

FOREWORD 3

INTRODUCTION 7

CHAPTER I
Present Format of Public Service Education 10
In-Service Education 11
Pre-employment Education 11
Existing Programs 12

CHAPTER II
The Challenges 16
Career Families 16
Effective Education 17
Need for Data 17
Neglected Student Services 17
Specific Populations 18
Private Junior Colleges 20
Government Hiring Practices 20
Professional Groups 20
Shortage of Faculty 20

CHAPTER III
Basic Public Service Career Families 21
Community Development 21
Education Services 22
Human Services 23
Judicial Services 24
Public Finance 25
Resources Management 25
Transportation 26
Agency Management 27
Other Possibilities 28

CHAPTER IV
Analysis of Public Service Education 30
Essential Elements 30
From Base to Courses 34
Career Family Base 35
Specific Occupational Skills 36
Structuring an Associate Degree Program 36

CHAPTER V
Building a Delivery Capability 38
Determining Demand and Supply 38
Structuring Career Education 39
Integrated Approach 41
Implementing the Plan 43
Some Applications 43

CHAPTER VI
Improving Organization and Administration 47
Emergence of Departments 47
Unification of Departments 47
Multi-Unit Approach 49
Small Private Colleges 50
Autonomous Career College 50
Organization 51

CHAPTER VII
Government Activities and the Community College 53
Civil Service Agencies 53
Department of Health, Education, and Welfare 57
Manpower Services 57
Community Action Agencies 59
Department of Housing and Urban Development 60
The Transition Program 61
Law Enforcement 61
Environmental Protection Agency 63
Department of Transportation 63
Agencies and the Community Colleges 64

CHAPTER VIII
The Future 66

APPENDICES:
Program Outlines 68
A Air Traffic Control 68
B Child Care 69
C Corrections 69
D Fire Science 70
E Law Enforcement 70
F Recreation Leadership 71
G Teacher Assistance 72
H Traffic Engineering Technology 73
I Community Services Technology 74
J Pollution Abatement 75
K Library Technology 75
L Urban Planning Technology 76

Preface

It has long been accepted that good government rests on good people and that it is impossible to separate the abilities of government from the abilities of its personnel. Traditionally, however, our governments have not had a sustaining source of well-qualified people at the mid-entry levels. The need for just such a source becomes increasingly more critical with the real and projected growth of all governmental levels.

Andrew Korim, through this publication, has successfully reached the heart of this problem and both filled a long-existing void and presented us with a logical blueprint for improving the education and training of government employees. This frank, comprehensive look at government's responsibilities and the capability of our nation's community colleges to respond, is refreshing. Not only does the author present a philosophical discussion of the respective roles of these institutions, but he also offers a step-by-step approach for junior college officials to build on.

Hopefully, community college and governmental officials will seize the opportunity to follow this blueprint for action to overcome the pressing shortage of skilled manpower. Not to avail themselves of this opportunity for a joint effort in public service career education would indeed be a significant mistake, and a loss for all concerned, especially for their clients—the citizens.

MARK E. KEANE
Executive Director
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Foreword

This publication came into being as a result of issues and concerns raised during interviews with government officials, at workshops conducted by the American Association of Junior Colleges, and at conferences held by other organizations. The general feeling evolved that the opportunities for educational program development for public careers in local, state, and federal government agencies should be reviewed and placed into perspective.

An attempt is made in this publication to pull together the elements needed to design an orderly system of public service career education in community colleges. Families of public careers and common elements of educational preparation that underlie *all* government services are presented. An integrated system for public service education is suggested. Some sources of cooperation and financial support are analyzed.

The publication is intended to serve as a planning tool to be used jointly by community colleges and public agencies. Hopefully, as community colleges and government agencies pool their resources and efforts, a sustaining source of qualified personnel for government service will be developed.

The following publications produced on public service career education by AAJC provide valuable background information for this publication.

Urban Government Manpower and the American Junior College, James S. Counelis, 1968.

Guidelines for Law Enforcement Education Programs in Community and Junior Colleges, Thompson S. Crockett and James D. Stinchcomb, 1968.

The Role of the Community College in Developing Traffic Specialists and Technicians, Richard Bishop and Gordon Sheehe, 1968.

Guidelines for Work Experience Programs in the Criminal Justice System, Jimmie C. Styles and Denny F. Pace, 1969.

Guidelines for Corrections Programs in Community and Junior Colleges, Vernon B. Fox, 1969.

Guidelines for Fire Service Education Programs in Community and Junior Colleges, Donald F. Favreau, 1969.

Traffic Engineering Technician Programs in the Community College, Adrian Koert, 1969.

Recreation Program Leadership and the Community College: Issues and Perspectives, H. Douglas Sessoms and Peter J. Verhoven, 1970.

Law Enforcement Training and the Community College: Alternatives for Affiliation, Denny F. Pace, James D. Stinchcomb, and Jimmie C. Styles, 1970.

Aviation Guidelines, Harold L. Finch, 1970.

A task force, consisting of community college representatives, government officials, and representatives of various organizations with special interest in public careers, has assisted substantially in bringing this publication into being. A number of students and community college graduates also contributed significant insights. All of this assistance was invaluable for identifying salient issues related to public service education, but the author assumes the responsibility for the shortcomings of the publication.

The funds to cover this endeavor were generously provided by the W. K. Kellogg Foundation through AAJC's Occupational Education Project, and the Danforth Foundation through the Association's New Institutions Project.

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Introduction

From my own background in the academic world, I know that very little hard thinking ever really was devoted to the idea of general or even specialized training for the public service. There has been a great deal of specialized training in the law, engineering, planning, and other specialized fields which governments use. The idea of training for government service in general, however, especially at managerial levels seems to have engaged little academic attention.

FRANKLIN M. BRIDGE
Director
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As we begin this examination of the role of the community college in preparing people for careers in government, it is appropriate to review briefly the underlying characteristics of the public sector, the shifting patterns in thinking regarding education, and some trends pertinent to the development of the skills and competencies of government personnel.

Historically, in the United States, when private enterprise fails to provide adequate services, we turn to publicly institutionalized solutions. Local governments are called upon to develop a solution. If townships, counties, or municipalities cannot achieve results, state governments take over. When state governments fail to deliver, the federal government inherits the responsibility. But now this trend seems to be reversing itself. There is a growing realization that the federal government alone cannot do the job effectively and that only improved local delivery can be responsive to the needs of the people. More and more frequently a combination of local, state, and federal involvement is developed to cope with the needs of the nation.

The improvement of services provided by government agencies and the increase in their number—especially at the city, township, and county levels—are an indication that these services are not being provided by the private sector. Currently, there are more than 80,000 local governments. As these instrumentalities focus on the needs of our rural, suburban, and urban extremes, they will require new employees with new interests, skills, and capabilities. Regardless of the level of government called upon to perform the functions, once a responsibility is acquired, a concerted effort will be needed to prepare personnel to do the jobs. A functional division of labor, typically viewed as a ladder of careers, together with appropriate preparatory experiences providing self growth, formalized education and training, and learning by working, will give the essential framework for service.

What are the sources of people used to fill these government positions? There is a lot of discussion these days about Ph.D.'s who cannot be placed in government jobs because their academic preparation was inappropriate. The argument is that the person with a Ph.D. may serve well in research, but he is weak on skills needed to provide government services. In some quarters it is said that the master's and bachelor's degrees are obsolete as realistic preparation for

the labor market. More and more government employers think that people with one and two years of college make ideal entry-level employees. Once placed in an occupation, and provided with opportunities for advancement and upgrading through supplemental education, these employees can eventually develop the qualifications to fill positions which the doctor's, master's, and bachelor's degree holders do not fill well. Are these statements heresy? They may be. But the fact is, our educational structure has shown little concern for developing competencies that permit people to enter public service occupations at the levels at which they are needed, and at realistic salaries.

Government agencies, unlike private firms, do not operate on the principles of the private marketplace. Profit or loss is not a measure of the success or failure of a government agency. Competition for government openings usually takes the form of written examinations. The concept of productivity is difficult to apply in determining the value of a government employee, in establishing salary schedules, and in determining career advancement. The personnel practices of the private sector have only limited application to government personnel.

Yet, by and large, civil service agencies have turned to the labor market of the private sector to find people to fill vacancies. Either through internal training programs or by depending upon the day-to-day experiences on the job, employees are expected to develop the skills and knowledge they need. Historically, there has been no sustaining flow of personnel with preparation specifically for government service, especially at levels below the B.A. Rarely, have the counselors in high schools and colleges presented to the student the critical question: *Do you want to prepare for a career in government?* Interest and aptitude examinations are, for the most part, structured to identify the combination of responses predictive of success in private sector careers.

Recently, some encouraging trends have been emerging suggesting that a more sophisticated civil service is in the making. This could place the community college in a pivotal role. These are some of the trends.

Civil service agencies show increasing interest in community junior colleges as a source of personnel to fill positions. Some agencies give released time to employees to attend community colleges, in some cases with pay or cost reimbursement. Increasingly, agencies are abandoning their internal training programs in favor of some form of cooperative program with community colleges. These would blend career exploration, skill development, supervised work exposure, and a job commitment pending graduation.

The "New Careers" concept which relates the hierarchy of job tasks with the hierarchy of education ranging from single courses to modules of courses leading to certificates of completion or associate degrees, is catching on among educators and government employers.

Emphasis on "accountability" in the operations of government agencies is placing pressure upon agency administrators to upgrade the management of their operations. This has obvious implications for personnel hiring, training, and career advancement procedures. The tax payer revolt, as evidenced by the frequent defeat of local bond issues, can be interpreted as being a signal that the public wants a bigger return for the tax dollar than it has been getting. Better prepared personnel is one way of getting it.

Job engineering and long-range manpower planning are becoming normal practices in government agencies. Local residence requirements are being relaxed in a growing number of municipal and county agencies permitting greater mobility. Revenue sharing between the federal government and local communities offers the promise of increased funds to local government and community colleges for upgrading the local corps of civil servants.

This publication will bring into focus public service education in community junior colleges, highlighting associate degree education as a source of personnel for township, county, city, state, and federal agencies. It is intended to provide information to community college planners regarding program design and implementation. To employers in the public sector, it is intended to provide an opportunity to consider the capabilities of the community college for helping them fill their personnel needs.

Hopefully, this publication will give some impetus to senior colleges and universities to develop curricular offerings at the baccalaureate level permitting community college graduates the opportunity to

continue with a realistic preparation for careers in government service. The need for research at the local and national levels by educators, government manpower specialists, and public interest groups can be implied from conditions herein described.

Key aspects of public service education are developed successively. An analysis is made of the present format existing in two-year colleges, and some of the challenges of the future are outlined. A comprehensive approach to the delivery of career education for government employment is suggested. Examples of the organization and administration of career education are offered. Potential areas of linkage between community colleges and government agencies are suggested. Above all, attention is given to the need for improved educational services to the student interested in a career in government.

1

Present Format of Public Service Education

Our thinking about local governments has stagnated. . . . We lack realistic expectations of what local governments should provide or cost. . . . Too many people think of local governments as composed of trash collectors, police, and firemen, and fail to realize the range of tasks to be done and of human talents needed.

Governmental Manpower for Tomorrow's Cities
Report of the Municipal Manpower Commission[2]

A program for child workers at Holyoke Community College, Holyoke, Massachusetts, is preparing personnel for employment in day care centers.

Charles County Community College, La Plata, Maryland, has a program for the development of environmental control personnel.

Teacher aides are being developed at Parkland College, Champaign, Illinois.

Golden West College, Huntington Beach, California, has a social service technician program with supervised field experiences as an integral part of the student's learning experience.

Indian counselor aides are being trained by Lake Region Junior College, Devils Lake, North Dakota, to serve the needs of the nearby Sioux Reservation.

Prospective police officers are given the basics of law enforcement at Central Wyoming College, Riverton, Wyoming.

County employees receive in-service education at Butler County Community College, Butler, Pennsylvania.

Green River Community College, Auburn, Washington, is working with the Federal Aviation Administration to develop air traffic control specialists.

Manatee Junior College, Bradenton, Florida, is cooperating with local agencies to prepare personnel for careers in urban planning.

These cases project the profile of public service education in the more than 1,000 community junior colleges in the nation. In rural, suburban, and urban communities, these and many other programs are contributing to the improvement of government services.

In response to local pressures, community colleges have been thrust into a rapid expansion of curricular offerings in public service education. These community college programs have been designed basically for up-grading existing employees of government agencies and for the preparation of personnel for entrance into mid-level or intermediate careers in government. Since an early study by Norman C. Harris,[3] many significant developments have occurred in both in-service and pre-employment education for public careers. A brief analysis of the in-service and pre-employment educational programs in community colleges follows:

In-Service Education
As community colleges embark on the development of educational services for government manpower, they find it less complicated to conduct in-service, supplementary educational activities than to initiate pre-employment programs. These in-service activities can include:

1. General education courses designed to improve communication and overall intellectual development

2. Liberal arts and science courses needed to support basic occupational skills

3. Upgrading and updating courses pertaining to position presently held by an individual

4. Special skill courses for people reassigned by the employer

5. Skill development courses to fulfill qualifications for a new position

6. Courses to advance competencies of persons promoted to higher levels of performance and responsibility

7. Specialized courses consisting of the development of knowledge in support of a particular skill

8. Introductory courses in public service providing general information on the public sector.

In-service education does not produce the critical personnel for new categories of occupations, or for the redesigned, new, and emerging careers in government. To train people for these jobs, community colleges have developed a variety of pre-employment curriculums.

Pre-employment Education
Pre-employment curriculums have as their basic goal the development of specialized skills and knowledge, as well as increasing basic qualifications required in specific occupational categories. Generally speaking, the pre-entry skill development activities of community colleges focus on producing technicians for the intermediate level occupations sometimes identified as "para-," "semi-," or "pre-" professional. These preparatory programs range from short term skill development courses to associate degree curriculums.

Pre-employment education for intermediate or middle level positions in government prepares students for two categories of occupations: those identical with the private sector; and those unique to the public sector, or noncompetitive with the private sector. Although these categories are not without exception, the distinction does permit a useful analysis of the public careers labor market. And it is essential in order for community colleges to identify areas of priority in program development. All too frequently, public sector occupations have been ignored by educational institutions.

Occupations Identical with Private Sector. A number of occupations in government agencies are basically identical with private sector occupations. Examples of the middle level occupations common to both private and public areas, and served by the community colleges, include: computer programming and data processing; stenography and secretarial work; engineering drafting; chemical technology; electronics technology; nursing and allied health; and accounting.

These occupations, even though the employer may be a government agency, have basic features of the private sector which heavily influence the related education and training programs. For instance, the private sector of the economy is the major or dominant employer for these occupations. The pre-employment interest of students in acquiring career education is, therefore, usually established in response to the demands of the private sector. Usually, the educational and skill development offerings in community colleges reflect the needs of the private sector more than the needs of government agencies. However, persons with skills in these occupations can find initial employment in government agencies or can transfer from the private employer to the government employer rather easily.

Since educational institutions have had programs to serve the predominantly private sector occupations, the discussion here will focus more on occupations unique to the public sector. This should not be interpreted to mean that the education and training programs for these occupations need not be government related, especially if it is known that the student has interests in working for a government agency and wishes to make civil service a career.

Occupations Unique to the Public Sector. A number of occupations are basically unique to the public sector. The major employer for

A building inspector (right) graduates from 36-week program, offered by City Colleges of Chicago in cooperation with Cook County Board.

these occupations is a government agency. Specialized knowledge and skills relating to the economic and service functions of the agency are required for entry. Increasingly, civil service criteria must be met by the prospective employee, and advancement is subject to civil service requirements.

The opportunities available to community college graduates often reflect redesigned, new, or emerging government functions. The occupations are middle strata, and, more and more, an associate degree or lesser postsecondary skill education qualifies a person for employment. These careers permit mobility, such as location and agency changes, and vertical movement, but usually exclude a direct move to the private sector.

Although governmental agencies have acute shortages of both kinds of employees, the public category provides the community college with the greatest opportunity to develop innovative services simply because the educational system has generally neglected to serve it.

Existing Programs

In reviewing the existing educational programs for public service occupations it becomes clear that the nomenclature and scope of instruction vary widely. The following titles represent the major public service programs at the certificate and associate degree levels presently in operation in community junior colleges.

Air traffiic control specialist
Child care aide
Corrections officer
Environmental control technician
Fire service technician
Highway safety technician
Law enforcement officer
Library assistant
Park management assistant
Recreation leader
Social service technician
Teacher assistant
Urban planning technician.

Surveys of some of these programs have been conducted to determine their number, location, and related data. *Table I* summarizes this information.[4] (Appendices A through L outline curriculums for associate degree programs for selected public service occupations.)

Data collection on public service education programs is limited. Therefore, accurate data on the number of associate degree graduates developed by these programs is not available. The Carnegie Commission reports that present procedures for reporting statistics of students enrolled in all occupational programs are highly unsatisfactory in that regularly published statistics of the U.S. Office of Education do not

provide figures for the number of students enrolled in occupational programs in specific fields.[5]

A conservative estimate based on information available to the American Association of Junior Colleges puts the number of associate degree graduates completing public service career education programs in 1970 at about 17,500. This figure does not include the huge number of personnel employed by government agencies who annually attend a wide range of developmental courses and seminars upgrading and updating their knowledge and competencies. Furthermore, this figure does not include those persons who annually enter government employment with associate degrees in occupational programs categorized as private sector occupations.

Table I

PUBLIC SERVICE CAREER EDUCATION PROGRAMS IN COMMUNITY COLLEGES

Program	Degree			Source of Information	Date of Survey
	Certificate	Associate	Unspecified		
Air Traffic Control Specialist		31		"Aviation and Transportation Majors and Curricula." *Aviation Education,* Federal Aviation Administration, U.S. Department of Transportation, Washington, D. C.	May 1970
Child Care Aide and Related Child Development Programs			34	*Career Opportunities— Community Service and Related Specialists,* J. G. Ferguson Publishing Company, Chicago, Illinois	1970
Corrections Officer	10	23	1	W. K. Katsaris, *Corrections Education: A Survey,* Tallahassee Junior College, Tallahassee, Florida	December 1969
Environmental Control Technician			58	Newton, David F., "Environmental Technology Programs" *Junior College Journal,* December-January 1970	December 1970
Fire Service Technician		100		Kahrmann, Robert G., *A Survey of Institutions of Higher Education Offering Programs in Fire Science* (Unpublished), Jersey City State College, N.J.	Fall 1969
Law Enforcement Officer— 48 institutions in the listing are universities		257		*Law Enforcement Directory,* International Association of Chiefs of Police, Washington, D. C.	1970
Library Assistant			108	*Career Opportunities— Community Service and Related Specialists,* J. G. Ferguson Publishing Company, Chicago, Illinois	1970
Recreation Leader			107	*Carreer Opportunities— Community Service and Related Specialists,* J. G. Ferguson Publishing Company, Chicago, Illinois	1970

Program	Degree			Source of Information	Date of Survey
	Certificate	Associate	Unspecified		
Social Service Technician			53	*Career Opportunities—Community Service and Related Specialists,* J. G. Ferguson Publishing Company, Chicago, Illinois	1970
Teacher Assistant and Aide. In 1970 Ferguson found 80 unspecified programs.	9	37	16	John Martinson and Martha Dix Graham, *Training Teacher Assistants in Community Colleges,* Communication Service Corporation, Washington, D.C.	October 1968
Urban Planning Technician	2	20		*Education and Career Information for Planning and Related Fields: January 1971,* American Society of Planning Officials and American Institute of Planners, Chicago, Illinois	January 1971

[1] Bridge, Franklin M. Letter to Andrew S. Korim dated March 5, 1971.

[2] *Governmental Manpower for Tomorrow's Cities.* Report of the Municipal Manpower Commission. New York, New York: McGraw-Hill, 1962. p. 5.

[3] Harris, Norman C. *Technical Education in the Junior College: New Programs for New Jobs.* Washington, D.C.: American Association of Junior Colleges, 1964. 102 pages.

[4] Felton, Nadine, *et al. Directory of Colleges Offering Degree Programs for Paraprofessionals Employed in the Human Services.* New York, New York: New Careers Development Center, New York University, February 1970.

Feldstein, Donald. *Community College and Other Associate Degree Programs for Social Welfare Areas.* New York, New York: Council on Social Work Education, June 1968.

Walker, Jean M. *Directory of Transportation Education in U.S. Colleges and Universities.* Washington, D.C.: American Trucking Association, no date. 24 pages.

[5] Carnegie Commission on Higher Education. *The Open-Door College.* New York, New York: McGraw-Hill Book Company, June 1970. p. 44.

2

The Challenges

Before I went into the_____ program at_____ College I questioned job possibilities and was answered in the affirmative. After completion of the program, I was told there were none. *I feel the school did a great disservice to the students in that program who entered with trust. My money, time, and effort were wasted as far as usefulness in the labor market was concerned.*
A Former Student[6]

Public service education has offered community colleges vast opportunities for innovation. However, while a number of community colleges have responded to the challenge, actual success has been uneven, reflecting entrepreneurial efforts of both faculty and staff.

A number of undesirable conditions existing today in the community junior colleges are revealing. Public service curriculum offerings generally are concentrated only in the highly visible, uniformed occupations. Communication between the community college and the public employer is not always satisfactory. The situation varies according to locale, agency, level of government, and the specific orientation of the community college. In some states, there is virtually no public service career education in community colleges.

Curriculum content is diverse. Low student interest in many public service careers reflects poor information, ineffective counseling at the secondary level, and a negative reaction to personnel practices of agencies. In addition, the career opportunities for community college graduates in public service are not always well publicized.

In order to improve these conditions, corrective action must be taken.

Identifying Distinct Career Families

One of the keys to the future success of public service education is the identification of families of government careers at the technical and intermediate professional levels. For improved career decisions to take place, and to provide relevant educational services, the career families must be based on functional distinctions.

First of all, the families of careers must reflect discrete governmental functions performed at local, state, and federal levels rather than designations based on accounting conveniences or isolated pieces of legislation. Existing community college public service programs must be structured within the functional families. Secondly, a primary body of knowledge, practices, and competencies necessary for entry into intermediate employment must be identified. This body of knowledge will become a foundation for community college programs. Thirdly, within each of the career families, the specific competencies required for particular occupations within a family must be identified and

incorporated into the curriculum. Job analysis must become increasingly important as a basis for curriculum building.

Effective Education

We can see from the list of offerings identified earlier that there is such a proliferation of courses being offered that community college resources become dissipated. This presents problems for the student who wishes to move from one area of public service to another within the same college. All public service programs need to be fashioned into a meaningful continuum that would permit transfers from within, external transfer, and upward growth, according to the needs of the student and the requirements of government employers. Such a continuum should make entry, exit, and re-entry easy.

Generally speaking, community colleges have not identified the basic competencies, common knowledge, essential behavior patterns, and underlying attitudes which are required for all government careers at the associate degree level of entrance. Fortunately there are some modest exceptions.[7] For continued progress, public service education in community colleges must lay down a common foundation as an introduction to all public service curricula—a foundation appropriate to the decision making that faces an employee at the associate degree level of employment.

Community colleges find it extremely difficult to absorb the diversity of opinions that come from employers in the public sector, professional groups, and leagues and associations representing public interest groups. Without a unified approach by these various groups, it becomes difficult, if not impossible, for the community college to develop a broad-based core of valid educational experiences preparing students for employment.

Need for Data

The demand for and the supply of the para-professional, the semi-professional, and the technician in the government labor market must be defined more precisely. The public careers labor market looks good for the community college graduate, especially in such priority areas as environmental control (air and water pollution), human services, and educational services. But community colleges need comprehensive information on labor market demand to insure that they offer viable programs.

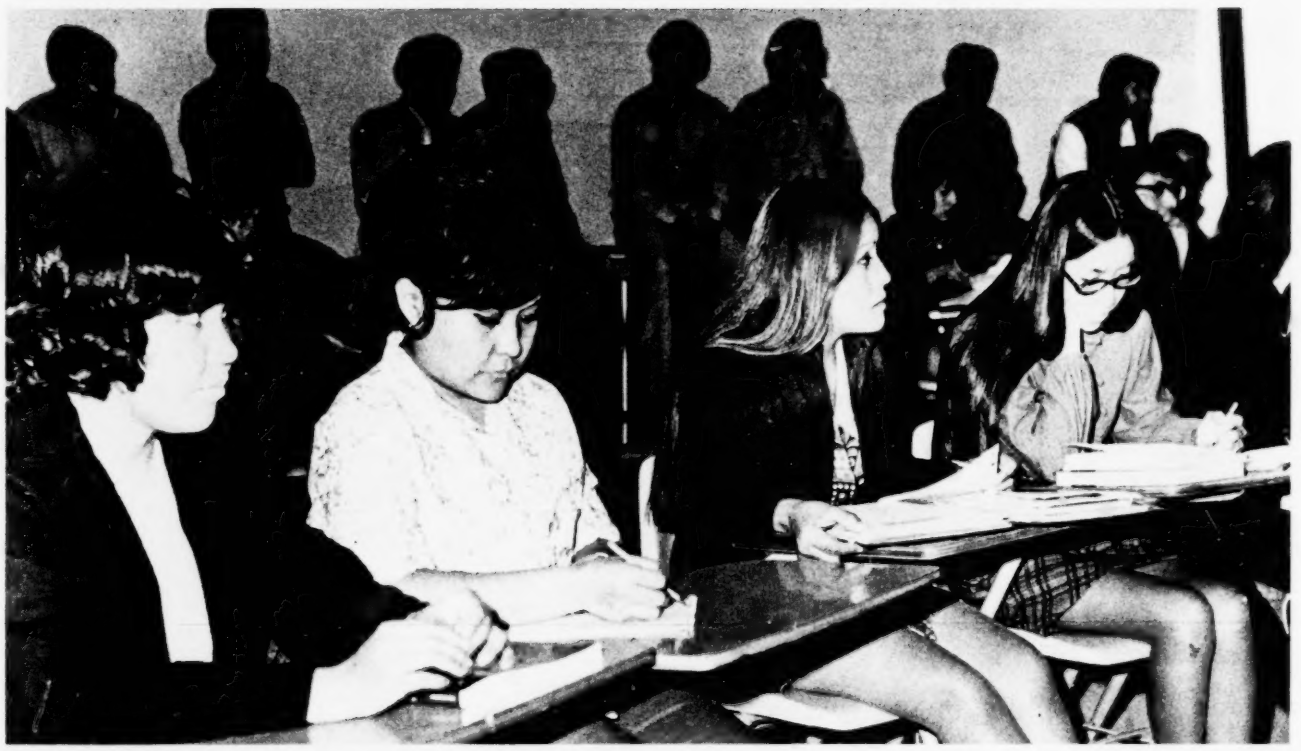
Statistical data regarding the actual need for personnel at the associate degree level is generally unavailable, or, if it is available, it is too general to be of value to college planners or students seeking guidance on a career in public service. It is not enough for community college planners to know, for instance, that workers in a given government function will increase by a certain percentage in the future. Information is needed regarding specific occupations in various labor market areas. Some progress is being made by the U.S. Department of Labor to provide improved data, as illustrated by the Lecht analysis of manpower requirements for national objectives.[8] However, the data system must become much more sophisticated in terms of the middle level careers. The recent work by the Bureau of Labor Statistics in *College Educated Workers, 1968-80* is an important beginning in reporting supply/demand projections for occupations generally requiring one and two years of community junior college preparation.[9]

Although it may be presently deficient, the national Job Bank operated by the U.S. Department of Labor has the potential of serving as a labor market referral network for public occupations.

Neglected Student Services

The student—the prospective student as well as the present and the former student—although the primary reason for the existence of the community college, often gets only a minimum of career guidance, occupational placement, follow-up assistance, and other services. This is especially true in public service education where the bulk of the career opportunities are less obvious than in other kinds of programs. The student-oriented philosophy of the community college must be extended into actual service to the student. Ancillary student personnel services must be made the object of a direct thrust and put on a par with and integrated into instructional services. The services must begin back at the pre-admission level, reaching into secondary, elementary, and even pre-elementary education and extend forward into the career placement and post-employment phases.

Twenty-one basic student personnel functions in community junior colleges have been identified by Charles Collins (See *Table II*). These many services tend to be administered on an



Students at Navajo Community College, Many Farms, Arizona, attend a seminar on career opportunities in social service.

optional basis rather than as an integral part of the career education process.[10] Only modest progress has been made in identifying attitudes and aptitudes relevant exclusively to government employment. Unfortunately, guidance personnel usually have little knowledge of the data essential to the meaningful selection of a public service career. They must be made aware of the range of educational and occupational opportunities available in public service. Research on the relationship between interests and abilities, and between educational success and occupational performance is badly needed.

Specific Populations

Many publicly funded projects designed to provide training and education for persons of the ethnically segregated, economically isolated, and educationally deprived strata of the rural and urban extremes of our society exist in the private and public sectors.[11] The public sector has obligations specified in legislation to restructure career opportunities for improved access by the unemployed and underemployed. These projects might be improved by increased involvement of community colleges in training and education.

These are some basic principles applicable to community colleges serving special population groups.

1. The proximity principle: campus and off-campus centers are close to the homes of the target population, places of employment or prospective employment, and the community and social service agencies.

2. The internal transfer principle: multi-dimensional transfer opportunities exist within community colleges, such as from remedial development to occupational or pre-baccalaureate curricula, from part-time special status to full-time status, from pre-baccalaureate to associate degree programs, from off-campus noncredit courses to degree programs (and vice versa in each case).

3. The principle of compassion: administrative, instructional, and ancillary services are dedicated to reaching the unserved persons.

4. The high response principle: the decision-making process in community colleges has been relatively free of delay-producing procedures.

These principles must be related to educational programs designed to prepare special population groups for government careers. Otherwise, the principles become meaningless rhetoric.

Career development and education efforts are reflected in a number of programs concerned with

18

Table II

PERFORMANCE OF BASIC STUDENT PERSONNEL FUNCTIONS

Functions	*Percentage Ratings*			
	Excellent	*Good*	*Mediocre*	*Poor*
Precollege Information	10	67	23	
Student Registration	10	66	22	2
Student Self-Government	18	53	23	6
Academic Regulation	8	64	22	6
Co-Curricular Activities	12	56	24	8
Student Advisement	5	57	20	18
Educational Testing	8	55	32	5
Applicant Appraisal	7	53	35	5
Applicant Consulting	12	43	25	20
Financial Aids	12	39	29	20
Social Regulation	10	42	28	20
Personnel Records	5	48	35	12
Program Articulation	6	42	34	18
Student Counseling	12	34	32	22
Student Induction	12	30	19	39
Group Orientation	4	36	32	28
Administrative Organization	4	32	24	40
Placement	8	24	18	50
Career Information	2	20	28	50
In-Service Education		15	35	50
Program Evaluation		6	26	68

Source: Charles C. Collins, *Junior College Student Personnel Programs: What They Are and What They Should Be.* Washington, D. C.: American Association of Junior Colleges, 1967, p. 21.

improving human resources. Local community action agencies and other programs of the Office of Economic Opportunity; New Careers, and Public Service Careers projects of the U.S. Department of Labor; Model Cities projects of the U.S. Department of Housing and Urban Development; and Project Transition of the U.S. Department of Defense are some of the more prominent programs. In addition, there are numerous independent projects of local governments designed to restructure agencies and institutions to provide improved services to target populations and communities.

These efforts can be strengthened by a commitment from the community college leadership to make their institution receptive to the needs of agencies charged with resolving the inequities of being poor or different. Serving previously unserved persons often requires new concepts and new approaches in education. The challenges of serving these groups are analyzed in a study by Dorothy Knoell. Experiences of a number of community colleges, aspirations of selected students, and the relevance of testing instruments are among the topics reviewed in this study.[12]

Day care centers are increasing in number. Training of day care attendants and supervjsors will take place in community colleges and day care centers.

19

Private Junior Colleges

Generally speaking, private junior colleges have participated only sparingly in the development of para-professional and semi-professional curricula. Because of their social focus, they are prime candidates for involvement in programs for intermediate careers in the human services, educational services, and other aspects of the public sector. Special efforts should be made to mobilize their educational resources.

Government Hiring Practices

There are several serious hurdles in the hiring practices of government agencies which must be overcome to permit tangible opportunities to exist for community college graduates.

1. Government agencies do not often enough give formal recognition in their recruiting announcements to the two-year associate degree and to other levels of postsecondary education of less than two years' duration.

2. In some communities, political patronage continues to be an important criterion for employment in the intermediate level occupations.

3. Civil service entrance examinations are often broad in scope, emphasizing general verbal skills rather than specific occupational competencies related to the job to be performed; and this even when verbal skills are secondary to job performance and advancement. Many of the selection tests have not been examined for validity as job placement instruments.

4. Too often the job specifications for the associate degree level of employment have yet to be written or are so vaguely written that an individual without an associate degree could qualify. This is especially true in the case of townships, boroughs, and small counties where the merit system has not been introduced.

5. Although civil service officials generally are in the process of changing entry-level qualifications to give recognition to the associate degree, many of the operating agencies of government demonstrate a lag in the acceptance of associate degree graduates.

6. Budgeting practices by various agencies of local government do not permit adequate flexibility in hiring college graduates below the baccalaureate level. Community colleges must work closely with government agencies to eliminate these impediments.

Professional Groups

The public administration profession, like others such as health, engineering, and business, suffers from a form of myopia. It resists the design of new professional levels. Community college leaders must reduce the communications gap existing with that profession. Established professional groups should be up-dated and drawn into the mainstream of society's needs. They must see conditions as they are today, not as they were decades ago.[13] Then the role of the middle professional can be identified.

Shortage of Faculty

There is a serious shortage of qualified faculty members who understand the competencies needed for middle level public service careers and have a commitment to the associate degree level of employment. Teacher education institutions have not been a reliable source of personnel. With teaching techniques supplemented, professionals from the practicing field tend to be the best source of faculty for public service education at this time. For the future, new and redesigned curriculums in teacher education institutions are needed to produce an adequate flow of instructional personnel for associate programs leading to government careers.

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[6] This excerpt is taken from the reply of a student in a follow-up study. Specific details are deliberately withheld.

[7] Institute for Local Self Government. *Community College Programs for Public Service Occupations.* Berkeley, California: the Institute, October 1969. See also, White, Leslie R. *New Careers in Local Government.* Berkeley, California: Institute for Local Self Government, 1969. pp. 68-112.

[8] Lecht, Leonard. *Manpower Requirements for National Objectives in the 1970's.* Washington, D.C.: National Planning Association, February 1968. 471 pp.

[9] U.S. Department of Labor, Bureau of Labor Statistics. *College Educated Workers, 1968-80.* Washington, D.C.: U.S. Government Printing Office, 1970. pp. 20-25.

[10] Collins, Charles C. *Junior College Student Personnel Programs: What They Are and What They Should Be.* Washington, D.C.: American Association of Junior Colleges, 1967. pp. 13-15.

[11] Decker, Floyd A., *et al. Municipal Government Efforts to Provide Career Employment Opportunities for the Disadvantaged.* Washington, D.C.: National League of Cities and United States Conference of Mayors, December 1969.

[12] Knoell, Dorothy M. *People Who Need College.* Washington, D.C.: American Association of Junior Colleges, 1970.

[13] Counelis, James S. *Urban Government Manpower and the American Junior College.* Washington, D.C.: American Association of Junior Colleges, 1968. 66 pp.

20

3

Basic Public Service Career Families

We know from the detailed management studies we have made in cities throughout the United States that there are dozens of job classifications and thousands of positions that could be filled by public service technicians trained in properly designed two-year courses of study at the junior college level. I have prepared a list of these jobs—which I am certain is incomplete—to give you an idea of the field: public management administrative aides, zoning and subdivision technicians, statistical technicians, computer technicians, building inspectors, assessors, traffic engineering aides, urban renewal technicians, housing code enforcement officers, public housing managers, community organization workers, welfare and family assistance workers, recreation supervisors, park operation technicians, public finance technicians, public personnel technicians, public records technicians, protective services: police and fire, public health personnel (administration and technical), environmental health technicians (water supply, sewage treatment, solid waste disposal, air pollution abatement), library assistants, engineering aides, draftsmen, cartographers, surveyors, photogrammetric technicians.

DENNIS O'HARROW
Former Executive Director
American Society of Planning Officials[14]

Because distinct families of government careers are considered central to improved public service education, this chapter will focus on a number of career families. Examination of the highly critical functions of government suggests several major career families with clusters of related occupations within them. Generally speaking, the occupations are middle level and are not found in great numbers in the private sector. An appropriate associate degree, or a lesser level of secondary education and/or training will qualify an applicant.

Obviously each career family should be thoroughly analyzed to establish the occupational structure, job competencies and the opportunity for advancement, as well as the responsibility of the community college in offering education programs in that area. In some cases the structure of the career families is more clearly developed and more elaborate than in others.

A discussion of the characteristics and trends of several suggested career families follows. Some statistical data is also provided. Unfortunately, much of this data is very general and requires careful interpretation to be useful in planning educational programs. *Table III* gives a summary of the career families and the genetic characteristics of each.

Community Development

As our nation was emerging from one of crossroad towns and county seats to the modern megalopolis, the stages of development rarely included much planning. Until a few decades ago, planning and development of cities and suburbs ended after street design or the original layout of a plan of lots. After lighting and sewage plans were made, factories sprang up, houses sprouted nearby, and schools, churches, and stores followed the housing. There were no land use studies or performance standards to guide community development. Occasionally, a plot of land was reserved for a park.

Today, planning and development is a function found in township offices, the county government building, city hall, and state agencies. The establishment of the U.S. Department of Housing and Urban Development and model cities legislation expresses the nation's conscience. But in actuality, community planning usually reflects the concept of home rule and local interest. Urban and rural renewal, code enforcement, zoning, building inspection, and public housing are functions of local government

21

Table III

THE GENESIS OF CAREER FAMILIES IN PUBLIC SERVICE

Career Family	Functional Genesis	Examples of Middle Level Positions
Community Development	Planning and organizing elements within the community for orderly community growth	Planning Technician, Community Organizer, Building Inspector, Rehabilitation Advisor, Land Use Specialist
Educational Service	Developing individual competencies and intellect	Teacher Assistant, Special Education Aide, Library Assistant, School Community Representative
Government Agency Management	Organizing the supportive service units of government	Unit Supervisor, Personnel Management Aide, Administrative Aide, Junior Administrative Assistant
Human Services	Increasing opportunities for social and economic betterment, especially among those most deprived	Child Care Aide, Recreation Leader, Geriatric Aide, Mental Health Aide, Youth Worker, Social Service Aide
Judicial Services	Protecting human and property rights, and resolving related conflicts equitably	Legal Services Assistant, Law Enforcement Officer, Court Administrative Aide, Parole-Probation Aide, Corrections Officer
Public Finance	Managing the fiscal operations of government agencies	Property Tax Assessment Officer, Internal Revenue Service Technician, Social Security Claims Examiner, Tax Administrative Aide
Resources Management	Preserving the natural and man-made environment and restoring an ecological balance in public resources	Air Pollution Technician, Water Pollution Technician, Park Management Assistant, Fire Service Technician, Forestry Aide
Transportation	Reducing the hazards and inefficiencies of congestion in surface and air passenger-cargo flow systems	Air Traffic Control Specialist, Highway Safety Technician, Transportation Specialist, Traffic Engineering Technician

requiring a variety of specialized skills. Positions in community development appropriate to the associate degree graduate consist of such titles as planning technician, land use specialist, building inspector, and rehabilitation adviser.

In 1968, Harold L. Sheppard conducted a study of 130 cities with populations of 100,000 or more to determine the number of additional employees that would be needed in various occupations to accomplish the goals of the cities, if budget and other obstacles did not exist. In the case of housing codes and inspection jobs, the study showed that over 5,000 additional employees were needed in 130 cities. And more than 12,000 additional employees were found to be needed in urban renewal, rehabilitation, and model cities jobs. Of the housing codes and inspection job figure, non-professional positions were about 1,500; and of the urban renewal job figure about 7,800 were non-professional.[13] Obviously, socially needed but unbudgeted positions do not serve as a sound basis for educational planning, but the Sheppard study indicates the magnitude of the training and education job ahead if socially needed positions become budgeted.

Education Services

From pre-elementary through high school, education is basically public for most people. Since the inception of the land grant college in the 1850's, higher education has been increasingly supported by the tax dollar. With

growing support from public interest groups, demands for greater accountability have been placed upon all of education. Consequently, considerable attention is being given to restructuring the system to give improved service. Basic education, especially, is coming under heavy attack.

The restructuring in education is being expressed in the form of the utilization of auxiliary personnel to support the traditional teacher. These support personnel constitute new levels in the education profession. Their titles range from aide to technician and their functions vary from institution to institution. The Manpower Administration, U.S. Department of Labor, has identified at least 14 job titles at the aide and technician level.[16]

Generally speaking, these auxiliary positions include performing duties in support of classroom instruction; assisting in visual aid departments; working in science laboratories and vocational-technical shops; and aiding in student personnel services. The concept of auxiliary services clearly relates these specialists to membership in the teaching team.

Although there are signs of abundance in certain categories of teaching personnel, the growth in the total number of persons employed in public education expected for the near future is staggering. Expenditures by state and local governments for education are expected to grow significantly by 1980 as indicated in *Table IV*.

Sheppard estimated in the 1968 study that the number of additional job possibilities in education in the 130 city sample were about 84,500 with almost 40,000 being at the nonprofessional level. In library services, about 5,600 positions were identified with roughly 3,000 of these at the nonprofessional level.[17] According to the Department of Labor, by 1980 employment requirements for library technicians are expected to reach 124,000, an increase of 77 per cent above the 70,000 employed in 1968.[18]

Human Services

A rapidly expanding responsibility of government is that of direct personal service, popularized as human services, and including: behavioral rehabilitation, human rebuilding, public assistance, and constructive use of affluence. Focus is on the needs of special groups such as the handicapped, mentally disoriented, aging, various ethnic minorities, the poverty stricken, and disadvantaged children. These trends have opened up opportunities for people of all ages who can meet the needs of these groups. Model cities projects are designed to improve human services for the residents of the specific target areas built into the projects. Priority is being given to providing the services needed for a better life not only for the residents of urban ghettos, but for other categories, such as the rural poor and the handicapped.

In all these areas, new occupations in human services are emerging. Such positions as social service aide, recreation leader, mental health technician, and nursing home aide are typical of the new occupations in human services.

This focus on more and better services has placed agencies of government in the position of

Table IV

STATE AND LOCAL GOVERNMENT EXPENDITURES FOR EDUCATION
1968—PROJECTED 1980

Level of Education	Expenditures 1968 (billions)	Expenditures 1980 (billions)	Average Annual Rate of Change 1968-80
Elementary and Secondary	$30.5	$41.0	2.5
Higher	9.9	23.5	7.5
Other	2.5	4.2	4.4
Total	42.9	68.7	4.0

Source: *The U.S. Economy in 1980*, U.S. Department of Labor. Washington, D. C.: U.S. Government Printing Office, 1970. p. 44. Projections are based on a 3 per cent unemployment rate.

being the direct source for the delivery of human services. Many local governments or contractors of local governments find, however, that as they proceed to staff their operations, the manpower to do the job is not available. Traditional professionals seem to be poorly prepared to adequately perform many of the functions required. Crash programs to train people indigenous to the communities being served to do this job are well meaning. But usually these crash programs lack the depth to provide a continuing supply of people with competencies to staff the activities indefinitely. A number of community colleges have already responded to this challenge.[19]

Sheppard estimated about 27,000 possible jobs in welfare occupations in the 130 cities, with almost 18,500 at the nonprofessional level needed to raise services to an improved level in 1968. Of a total of about 19,000 job possibilities in activities related to recreation, 14,300 were at the nonprofessional level.[20]

Judicial Services

The judicial system in the nation is faced with extensive public pressures to modernize and to expand services into new areas, to improve existing services, and to make the system more accessible to poorly served groups. As a result, new dimensions of the associate degree level of employment are emerging, which, in turn, create career education opportunities for community colleges. Most of the existing programs focus on preparing police officers.[21] A few programs prepare personnel to work in criminal rehabilitation.[22] New occupations, such as the police community relations aide and the parole and probation aide, are being developed in some communities, and local colleges have responded with educational programs.

Sheppard's study of 130 cities showed the need for additional police positions in 1968 as about 37,400 with about 11,600 of the positions at the nonprofessional level.[23] Estimates by the Department of Labor indicate that employment requirements for full-time police officers in the police department of local governments in 1980 will reach about 360,000, a growth of 27 per cent over the 285,000 employed in 1968.[24]

The career education opportunities associated with civil cases are basically undeveloped. Often the judicial services occupations in the area of civil action are less visible than those associated

A student in the teacher aide program at Brookdale Community College relates classroom theory to on-the-job situations by working as a part-time instructional aide.

with criminal enforcement. However, as the system of justice moves toward a much more modernized institution capable of providing more effective and broader judicial services for all members of society, many new career opportunities at the associate degree level are likely to open up.[25]

The following are some of the emerging areas for career education in judicial services that community colleges may find useful to explore:

1. Field workers in semi-professional levels of legal assistance

2. New personnel associated with civil rights enforcement

3. Personnel for landlord and tenants court case work and other judicial aspects of real estate

4. Court case workers associated with divorce, orphans, and other aspects of family court

5. Personnel to staff the judicial services associated with consumer cases especially as they pertain to the poor.

In these various areas the community college is becoming an important source of personnel, and may play an even greater role in providing the types of people needed to up-date the system of judicial services, especially in over-populated urban communities.

Public Finance

Taxation as a means of generating revenue—whether it is property, sales, income, or special assessments on public improvements, or licensing fees—is uniquely a governmental operation. In these operations, there is a need for personnel with postsecondary education preparation below the baccalaureate degree level. This need for personnel is found in the fiscal operations of all levels of government. The total government purchases of goods and services in 1970 were more than $220 billion.[26] Obviously a budget of this magnitude requires a huge workforce with fiscal expertise.

In local government, the need for technician level personnel trained in fiscal operations ranges from property assessment and tax collection to budgeting, municipal debt management, and government disbursement. The positions are equally critical at the state and federal levels. For example, the United States Internal Revenue Service has been recruiting tax technicians. Other positions are in claims examination with the Social Security Administration, the Civil Service Commission, and the Veterans Administration.[27] Innovations in public aid are resulting in new opportunities for the technician interested in the field of public finance. Because of the linkage of public finance to the various service agencies of government, employment opportunities extend into these other agencies.

Inasmuch as the incidence of taxation falls upon elements of the private sector—real estate, income, and commodities—there are significant employment opportunities with private employers for persons trained at the intermediate levels of public finance.

Resources Management

It has been said: "That which is owned by the public, no one manages." Because of the abundance in the United States, the resources in the public domain have had few, if any, safeguards against depletion. Today, conservation of the natural endowment of critical resources is receiving increasing attention. Restoring the ecological balance has become a national priority.[28]

The U.S. Department of Agriculture, through the system of county agents, promoted crop rotation, insect and disease control, contour plowing, the farm pond, and other conservation practices. At the same time the nation's forests have been subjected to improved production practices. But resources management until recently did not go beyond this. Poor management of the man-made aspects of the environment has resulted in a rate of deterioration that complicates the process of maintaining an ecological balance.

Man's urban survival requires economizing water, air, soil, open space, parks, and other public resources. The protection of the natural and man-made environment against disintegrating elements becomes a major public concern, whether it is unhealthy air, filthy water, or trash in the streets and along the highways. Man, wildlife, and vegetation are in trouble, as they consume the residuals of insecticides and herbicides.
Today, environmental protection and control go beyond garbage collection and rat control at the dumps. Public responsibility for our nation's resources demands the employment of growing numbers of people to fill expanding and newly created positions.

The number of technicians employed by state,

local, and federal governments in water quality activities, for instance, is expected to increase from 5,900 in 1970 to 9,500 in 1975, according to the Federal Water Quality Administration (see *Table V*). In forestry, the U.S. Department of Labor estimates that the 13,000 persons employed as forestry aides in 1968 will reach nearly 20,000 by 1980.[29]

The Sheppard study showed that in 1968 the following unfilled job possibilities existed in occupations related to the protection and management of our resources in the 130 city sample (figures were rounded to the nearest hundred):[30]

Function	Additional Job Possibilities	Number of these Jobs at Nonprofessional Level
Antipollution enforcement	1,700	900
Fire	15,000	5,400
Sanitation	13,600	7,500

state, and federal—charged with the enforcement of transportation regulations concern themselves with franchises, fares and rates, safety, licensing, etc. Regulations affect all modes and arteries by which passengers and commodities move, whether the vehicle is the family car, a commercial aircraft, a truck, train, freighter, or pipeline.

These regulating and control functions associated with the flow of passengers and commodities result in a wide range of middle level occupations in government. These careers are in foreign, interstate, and intrastate commerce, in transportation safety, and in state motor vehicle administration. One and two years of preparation in a community college is often adequate for entry and advancement in these transportation careers.

The Federal Aviation Administration, for instance, has been recruiting community junior college students for positions in air traffic

Table V

MANPOWER NEEDS OF GOVERNMENT AGENCIES FOR WATER QUALITY ACTIVITIES, 1970-75

Employer	Employment 1970	1975 est.	Growth	Replacements	Total
Technicians:					
Local agencies	4,500	6,000	300	100	400
State agencies	1,000	2,500	300	200	500
Federal agencies	400	1,000	100	100	200
Professionals:					
Local agencies	6,000	8,500	500	700	1,200
State agencies	1,800	2,500	100	200	300
Federal agencies	1,600	3,000	300	200	500

Source: John Plater, "Safeguarding Our Water Pollution Control Workers," *Occupational Outlook Quarterly*. Winter 1970. p. 34.

The magnitude of future manpower needs in government agencies, for activities related to the conservation and management of our nation's environment, is reflected in the projected expenditures for selected functions in 1980 (see *Table VI*).

Transportation

Because of its basic economic characteristics, the transportation industry in the United States is highly regulated. Governmental agencies—local, control and other critical areas.[31] Based on a recent survey, the National Highway Traffic Safety Administration has identified 17 new occupations that are being created primarily at the state level to implement the safety standards established by the Federal Highway Safety Act. The survey showed that in 1968 there was a shortage of 36,815 people for these highway safety occupations. In a survey of county governments, similar shortages were found.[32] The Interstate Commerce

Table VI

STATE AND LOCAL GOVERNMENT EXPENDITURES FOR SELECTED ASPECTS OF RESOURCES MANAGEMENT 1968 AND PROJECTED 1980

Function	Expenditures 1968 (billions)	Expenditures 1980 (billions)	Average annual rate of change 1968-80
Sanitation	$0.9	$1.6	4.9
Natural Resources	2.3	4.2	5.1
Parks and Recreation	1.5	4.6	9.8

Source: *The U.S. Economy in 1980*, U.S. Department of Labor. Washington, D. C.: U.S. Government Printing Office, 1970. p. 44. Projections are based on a 3 per cent unemployment rate.

Commission employs transportation specialists qualified to secure compliance with rules and regulations of the Interstate Commerce Act. Similar functions at the state level provide middle level occupations in intrastate commerce.

Numerous other careers in various aspects of transportation services, regulation, and safety are appropriate for the community college graduate possessing the necessary skills, knowledge and career capacities. In addition to careers in the public sector, there are many similar opportunities in the private sector. A number of community colleges already have programs to prepare persons for entry and to upgrade persons already employed in transportation.

Government Agency Management

In addition to the various technical and professional personnel needed in the actual delivery of public services—whether they be judicial services, human services, community development or resource management—there is a need for personnel with organizational talents at middle and lower levels. These personnel serve as the first line supervisors of the supporting administrative services. The competencies necessary are basically those of middle management. But middle management of governmental operations requires procedures and practices not found in the private sector. Unique control, accounting and evaluative procedures come into being in the absence of the profit and loss statement, the quarterly dividend, sales commissions, bonuses and price and product competition, which encourage efficient operation of private businesses. Therefore, special preparation is essential in order to give the supervisor and his staff basic qualifications in these unique governmental procedures and practices.

Entry positions are often under titles such as administrative aide and personnel management aide. These titles, however, vary widely reflecting the operating circumstance within a particular government unit.

As the technical services of government agencies are increased, the demand for well-prepared administrative support personnel increases proportionately. Agency staffing at the local level in townships, boroughs, and small cities is especially poor, often because only local citizens without training are recruited.

Four-year educational institutions offering programs leading to the baccalaureate or master's degree in public administration are numerous. Their programs, however, concentrate on the area of decision making appropriate for the level of the top public executive. There are virtually no sources of people prepared in decision making for the rungs in the ladder of government agency management below top executive levels. The need for personnel, trained in the principles of first line and middle level management in the public sector, is acute. As the functions of government expand into new areas, the supervisory and middle management opportunities in agencies will inevitably grow.

By 1980, the number of employees in local and state governments is expected to reach 13,800,000 or about two-fifths more than the 9,891,000 employees in 1970. Employment in the federal government is expected to grow from 2,661,000 in 1970 to 3,000,000 in 1980, a 12.4 per cent increase.[33]

The Sheppard study showed about 14,000 unfilled job possibilities in general administration in local and state governments in the sample cities in 1968, with about 5,300 of these general

administration positions being at the nonprofessonal level.[34]

Other Possibilities

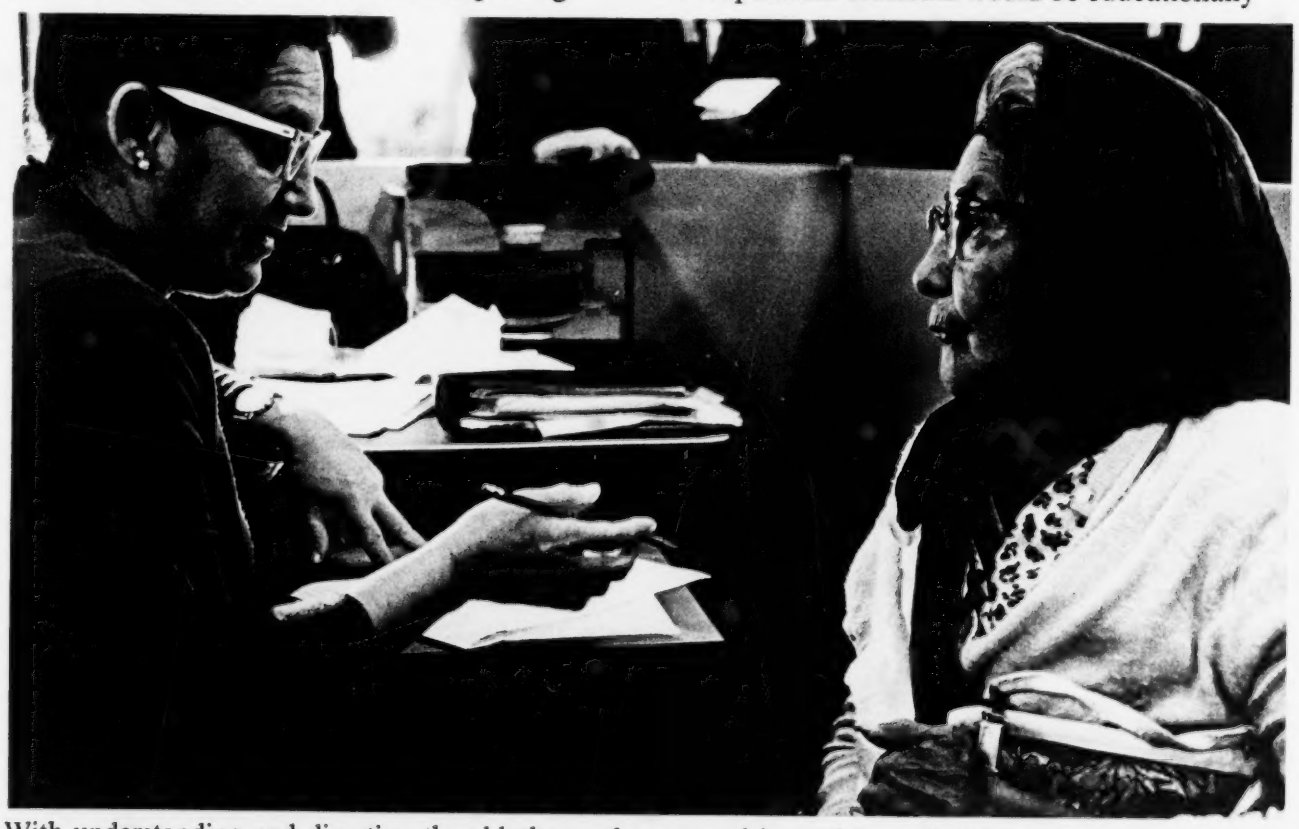
The eight career families reviewed in this chapter reflect those functions in which government agencies are currently major employers of middle level employees. Admittedly, other families of government careers could be structured.

One of these possibilities for the future may be public health. As health services become predominantly a government function, and as more middle level occupations in public health are identifiable, it may be feasible to structure such a cluster into a public health family. For the time being, the existing public health occupations may be included within the human service family.

Another career family which has been suggested is that of public works. There are within public works, however, a number of functions that overlap with functions in the community development, resources management, and transportation families. Depending upon the community, public works operations range from the operation of utilities and the management of public buildings to the maintenance of streets and the operation of transportation facilities. Often, public works is a designation that serves as an administrative umbrella encompassing many functions. Some governments are beginning to identify the position of public works technician. This technician would work in any one of these many areas. Until the occupations in public works become visibly distinct, it may be best to include them within other appropriate families, such as community development, resources management, or transportation.

Although priorities placed on environmental control functions by government lead some community college planners to consider the related occupation as constituting a separate career family, environmental control occupations are basically related to resources management and may be treated as options within the resources management family.

Certain occupations within a career family may overlap into other families. This depends upon the size and scope of the governmental unit, arbitrary decisions by job analysts, or simply because governmental functions, as performed in some communities, may not be mutually exclusive. Also, special interest groups may wish to give emphasis to their particular personnel needs. In these cases, the temptation is to design a unique curriculum for each occupation or for each agency. The resulting proliferation of educational programs into numerous occupational curricula would be educationally



With understanding and direction the elderly can be engaged in useful, profitable ventures.

unsound, adding to costs without adding benefit to the student.

The public service career family construct is intended to provide community colleges with the opportunity to improve the quality of educational programs for persons preparing for employment in government agencies. Extensive departure from the framework should be discouraged.[35]

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[14] O'Harrow, Dennis. "Junior College Training for Public Service." *Selected Papers—46th Annual Convention American Association of Junior Colleges.* Washington, D.C.: American Association of Junior Colleges. March 1966.

[15] Sheppard, Harold L. *The Nature of the Job Problem and the Role of New Public Service Employment.* Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research, January 1969. pp. 23-29. Estimates are given of the number of additional personnel who would be needed to implement increased delivery of services if obstacles usually cited, such as budget, are removed. The estimates indicate the number of positions that could be filled by persons with less than the traditional level of professional preparation.

[16] U.S. Department of Labor, Bureau of Work Training Programs, Manpower Administration. *Position Descriptions for New Careers.* Washington, D.C.: University Research Corporation, no date. See also, Cohen, Arthur M. *ERIC Junior College Research Review.* Washington, D.C.: American Association of Junior Colleges. Vol. 5, No. 6, February 1971.

[17] Sheppard. *The Nature of the Job Problem.* pp. 23-29.

[18] U.S. Department of Labor. *College Educated Workers.* pp. 24-25.

[19] Felton, Nadine. *Directory of Colleges;* and Feldstein, Donald. *Community College and Other Associate Degree Programs.*

[20] Sheppard. pp. 23-29.

[21] International Association of Chiefs of Police. *Directory of Law Enforcement Education.* Washington, D.C.: American Association of Junior Colleges. 1970. 17 pp.

[22] Katsaris, W. K. *Corrections Education: A Survey.* Tallahassee, Florida: Tallahassee Junior College, December 1969. 62 pp.

[23] Sheppard. pp. 23-29.

[24] U.S. Department of Labor. *College Educated Workers.* p. 25.

[25] Trebach, Arnold S. and Idelson, Evelyn M. *New Careers in Justice.* Washington, D.C.: University Research Corporation, National Institute for New Careers, July 1970. p. 7.

American Bar Association Special Committee on Lay Assistants for Lawyers. *Training for Legal Assistants: San Francisco Pilot Project Report.* Chicago, Illinois: American Bar Association, 1971.

[26] U.S. Department of Commerce. *Survey of Current Business,* February 1971. See Table I on page 9.

[27] U.S. Civil Service Commission. *Junior Federal Assistant.* Announcement No. 411. Washington, D.C.: U.S. Government Printing Office, November 1969. 7 pages.

[28] Council on Environmental Quality. *Environmental Quality 1970.* Washington, D.C.: U.S. Government Printing Office, August 1970. p. 227.

[29] U.S. Department of Labor. *College Educated Workers.* p. 23.

[30] Sheppard. pp. 23-29.

[31] "Aviation Curricula at Colleges and Universities." *Aviation Education.* Washington, D.C.: U.S. Department of Transportation, Office of General Aviation Affairs, Federal Aviation Administration, March 1970; and "Aviation and Transportation Majors and Curricula Offered by Colleges and Universities." *Aviation Education.* May 1970.

[32] Based on information received from studies conducted by the National Highway Traffic Safety Administration, U.S. Department of Transportation.

[33] Bureau of Labor Statistics, U.S. Department of Labor, *Employment and Earnings.* March 1971.

[34] Sheppard. pp. 23-29.

[35] Other related information can be found in "State and Local Governments—Burgeoning Need for Manpower," *Occupational Outlook Quarterly.* Washington, D.C.: U.S. Government Printing Office, May 1967. p. 19; Greenleigh Associates, Inc., *A Public Employment Program for the Unemployed Poor.* New York, New York: Greenleigh Associates, Inc., November 1965. pp. 53-55; Wiley, Lewis B. *Review and Analysis of Curricula for Occupations in Public Services.* Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education. November 1970. The Bureau of Labor Statistics, U.S. Department of Labor, has cautioned that statistical projections of need in public service occupations lose their significance rather quickly because of the rapid changes taking place in government.

4

Analysis of Public Service Education

Community colleges have an important role to play in partnership with governmental employers to strengthen the effectiveness of government in all areas—federal, state, and local. This is clearly on the action agenda for the Seventies, and is already under way in many parts of the country. The community college that succeeds in this will benefit its graduates and undergraduates, as well as the community in which it is located.

J. J. DONOVAN
Associate Director
Public Personnel Association[36]

Developing the potential of individuals for employment in the public sector may most logically be approached in terms of the functions of government. Although highly complex, the delivery system of government services can be divided into a number of subsystems such as educational services, judicial services, transportation regulation, and resources management. Each subsystem can be identified as a career family, as suggested in the previous chapter. The career family encompasses the specific functions of the subsystem. Within each career family are occupations which represent job specialization of significance to the subsystem. Using this delineation, then, the required skills and competencies fall into three categories. These divisions relate to: the overall system of government; specific career families within the system of government; and specific occupations within a career family.

A discussion of each category follows. Some suggested skills and competencies are identified and critical questions are raised as guides to be considered in designing an educational program which places these three aspects of job performance into perspective.

The present tendency at many colleges to construct a totally new curriculum for each public service career family and occupation is wasteful of community college resources. It violates sound educational planning, reduces the mobility of the graduate, and hinders lateral transfer within the college, should the student change his interests.

Essential Elements of the Public Service Base
In examining the skills and competencies necessary in the overall system of government, certain essential elements must be considered regarding public service career education in the community college. Entry into associate degree levels of employment in the public sector, regardless of the occupation, requires certain basic preparation. Major attention must be given to the development of a sound public service educational base consisting of a core of elements that will enable the new entrant to function effectively. Pertinent learning experience must be provided which will strengthen the credibility of the associate level of public employment and will, in the long run, enhance the image of careers in public service.

The skills appropriate to associate degree entrants must be examined within the context of the hierarchy of functions essential to effective

30

performance of government agencies. These functions rest on a statement of authority which is usually a vague expression of what service is to be rendered. From this initial commitment, a chain of events must occur before the service is available to the public. Very simply, it would be a chain of events such as this.

Level 1. Authorization for action, typically comes from the county board, the city council, or the legislature

Level 2. Policy development, usually the function of the chief executive, the mayor, governor, etc.

Level 3. Interpretation of policy, usually the responsibility of the administrator of the unit

Level 4. Identifying the resources needed, the responsibility of the manager of a specific operating department

Level 5. Organizing the logistics, a responsibility assigned to one of the supervisory personnel in the unit

Level 6. Rendering the service, performed by a team of specialists and auxiliary personnel.

Increasingly, associate degree graduates are being identified with Level 6, rendering the service. The associate degree graduate, therefore, must leave college with the education and ability to perform at this level as a public servant. Furthermore, he should go to the agency with a foundation that would permit him, if he is interested, to become a candidate for Level 5, organizing the logistics, and in turn for Level 4, identifying the resources needed.

The personnel at the service-rendering level bear the burden of representing the agency in highly visible positions. This means that the public—the taxpayer—sees these employees at the first and sometimes only personal encounter with government services. Level 6 personnel are equally strategic to the delivery of government services as Level 1 personnel, but Level 6 personnel are on the public firing line daily.

Successful rendering of service by a public servant is contingent upon effective performance in: interpreting the specifications of the duties assigned; preserving the integrity of individual interests of the citizen in balance with the general public interest; and expediting bureaucratic routines. It is valuable in many positions at this level to possess the skill to improve citizen relations and to cut red tape by effective negotiation within the agency. By looking at the hierarchy of government functions as an inverted spiral, with a broad base of daily complications being found at the first line delivery level, curriculum designers can build a meaningful educational program.

As colleges undertake the development of personnel, a number of specific areas of preparation should be included in the public service base. The following are some suggestions:

Operational Skills. Frequently, public employees at the associate degree level are given positions in government agencies without specific qualifications necessary at their level. They may have had courses in political science or in public administration, but rarely did the content of the courses pertain to the day-to-day decisions which an associate degree graduate is expected to make. The content of these courses may be appropriate to the decisions of the governor, the mayor, or the county commissioner which focus on development of overall policy, but not the first line public servant.

The executive-oriented courses expect the associate degree employee somehow to translate learning experience appropriate to the executive into information relevant to his level of public service. Conventionally it has been assumed that it is adequate for the employee to receive his first exposure to operational skills by trial and error on the job or that the employee will learn basic skills from his immediate supervisor.

The public employee at the service-rendering level must be specifically prepared in pertinent operational skills. These skills must help the employee perform functions associated with prescribed routines as well as with unexpected critical incidents. These unexpected incidents require a greater degree of personal discretion than do prescribed routines. Sidney Fine notes that the effectiveness or ineffectiveness of an employee tends to rest on performance in cases of a critical nature.[37]

Education and training must be designed to give the employee skills and knowledge needed to cope with both the prescribed routines and with emergencies. Work experience contributes significantly to such preparation. In addition, a wide range of role playing experiences under simulated conditions are valuable as an integral part of skill development.[38] Role playing should precede work experience whenever possible.

31

Each adds considerably to traditional forms of education.

In summary, to develop an effective employee for all public service career families, a body of skills and knowledge related to overall government operations must be included in the educational base for public service careers. The following are some specifics:

- Techniques of conducting first line service routines
- Strategies for coping with unexpected incidents
- Techniques of interaction between the agency representative and the citizen
- Strategies for effective decision making within the framework of government ordinances and regulations
- Procedures for translating general public priorities into daily operational practices
- Tools for the analysis of problems of first line government operations.

Public Personnel Procedures. Every employee should be aware of the characteristics and peculiarities of governing personnel in public agencies. There are a number of practices that affect all government career employees. The employee who comes to the public service with an understanding of these practices is likely to make the adjustment to his position with a minimum of frustration and misunderstandings.

Instruction in public personnel procedures is essential regardless of the career family, the uniqueness of a particular agency, or the characteristics of the political structure of the community in which the student may eventually be employed. Such preparation may be expected to result in substantial gains to the employee, to the agency, and to the general public.

In building the public service base, the following items should be included: characteristics of the civil service system; concepts of job analysis and position classification in public agencies; supervisor/subordinate relationships; differences between public and private employment; standards of performance in public employment; methods of evaluating public personnel.

The Public Interest Concept. Perhaps one of the most bewildering aspects of entry into public employment is the concept of the "public interest." Delivery of public services requires that employees have a clear conception of what the term means. Although it is important for people in all levels of employment in the public sector to have a meaningful interpretation of the concept, it is perhaps most important to those in daily contact with the average citizen. Most peoples' opinion of whether a government is good or bad is based upon the attitudes projected by the personnel directly rendering the services. Unless an employee truly understands what *being a public servant* means, he will have considerable difficulty in delivering services that meet the expectations of the public.

Public service education at the associate degree level must therefore give attention to the following:

- The ethical orientation of the associate degree employee
- Awareness of the impact of public opinion on the system of controls peculiar to the public sector
- The logistics of the delivery of public service and the role of the public servant directly confronting the public
- A definition of public interest relevant to entry occupations
- Relationships between the delivery of services, revenues, and the budget-making process.

Concepts of Government Organization. Entrants into public employment at the direct service level are likely to perform their tasks more effectively if they have an understanding of organizational concepts. The employee's part in the overall purpose of the agency can be clarified if he is given a sound foundation in relevant organizational principles. Such preparation will help to ensure that the hourly decisions made at the service counter, in the counseling booth, at the doorstep, or in the street will be more in line with the agency-public interest.

Some of the organizational elements appropriate for the public service base include:

- An analysis of sources of authority as they relate to the organizational structures of public agencies
- Delegation of authority as a tool to mobilize first-line personnel
- Job design in public agencies and its impact on the organizational structure
- Effective linkage between first-line personnel

and the public, fellow employees, the staff hierarchy, and other agencies

- An examination of problems of organizing middle and first-line delivery functions
- Case studies and field examinations of alternative organizational patterns.

Throughout the study of organizational concepts, the inverted approach is likely to have the greatest impact on the student. Although authority flows from the voter to the legislator, and in turn to the governing board and chief executive, the student is far removed from that executive. The student, however, often identifies closely with the lower levels of personnel. Therefore, students in certificate or associate degree programs are likely to be at their peak of motivation, and programs most effective, if there is an inverted emphasis in the analysis of organizational concepts. The student should be able to say, "These organizational ideas are for me, not for the mayor or the chief administrator."

From Base to Courses

Rather than leave the development of the generic elements of the public service base to chance, deliberate coverage in associate degree programs is essential. These elements may be transmitted to the student most effectively through specially designed introductory public service courses.

This basic foundation will ensure the development in the prospective employee of the skill and confidence needed to serve the public effectively in entry level positions, and to move up the career structure. The public employee needs to be given basic techniques which will prepare him to respond intelligently when confronted by a wide range of situations including the "irate citizen." To ensure that the new employee comes to the agency prepared to maintain a high level of performance in the agency or to improve the services rendered, a systematic preparation in overall public service is extremely valuable. Furthermore, such an introduction can also serve to give the student a fundamental orientation to the nature of public service, the various career opportunities, the characteristics of the career ladder, and the qualifications required to perform successfully in positions of public employment. These suggested introductory public service base courses should not be confused with the practice of requiring a core of communications courses to be taken by the student.[39]

Manchester Community College, Manchester, Massachusetts, offers the following course as an introduction for all public service career options:[40] Public Service 101 Introduction to Public Service. A study of the principles of administration, the relationship of effective leadership to effective administration, the decision making process, and the study of the principles at work in local and state government.

El Camino College, Via Torrance, California, has developed an introductory course covering operations of government which serves as preparation for specialization in career options in local government supervision and management, recreation, as well as for the peace officer and the social welfare technician.[41]

The Manchester and El Camino cases are only two examples of a trend by community colleges to revamp the curricula for public careers to include public service base courses. As this trend grows, caution should be exercised to ensure that *meaningful preparation* in basic, service-oriented operational skills, the concept of the public interest, public personnel procedures, and concepts of government organization are incorporated into these courses.

As a college proceeds to incorporate the components of the public service base into its educational program, the operational skills and the concept of public interest shall be synthesized into a single course. In developing the objectives and the syllabus for the course, the specifics of the operational skills and the concept of public interest outlined earlier in this chapter should be taken into consideration. The following course description is offered as a planning guide:

Public Service 101 *Effective Delivery Governmental Services.* This course is designed to give the student basic strategies of problem solving and decision making within the context of the principles of public interest. Emphasis is placed upon developing techniques and operational skills relevant to the first line public employee.

Similarly, concepts of government organization and public personnel procedures may be synthesized into a second course. As with the first course, in developing the objectives and the syllabus for the second, the specifics related to concepts of government organization and public personnel procedures reviewed earlier may be helpful. The following is a suggested description for such a course:

Public Service 102 *Public Personnel, Organization, and Operating Procedures.* This course is designed to analyze concepts of governmental organization and public personnel procedures appropriate to first line employees and operations in public agencies. Special emphasis shall be placed upon those

principles that highlight first line functions within the perspective of a governmental delivery system.

Initially, of course, colleges adopting such an approach to public service education may find a dearth of instructional materials. The challenge to innovate with course content, role playing, and instructional aids will be present.

Community colleges with existing curriculums in areas of public service such as human services, judicial services, community development, or educational services may find it valuable to incorporate the concept of a public service base. In reviewing the outlines of curriculums in Appendices A through L, it should be noted that although some include courses in government, these do not provide the elements of preparation suggested by the concept of a public service base. However, by substituting the public service base courses for less pertinent courses, the curriculums may be converted to provide a sounder preparation for employment in government agencies.

As new career opportunities emerge, the public service base will permit the community college to adjust to these new opportunities by building upon the base of courses needed to prepare individuals for careers regardless of whether the entry positions are at the associate, the baccalaureate, or the certificate levels.

Career Family Base

Whereas few examples of the implementation of a relevant public service base can be found in community colleges, some cases can be found in which a focus is given to the skills and competencies needed across the board in a given career family regardless of the entry occupation. Transportation, human services, and community development are cases in which the base has been developed and reflected in introductory courses. In these cases the career family base complements the public service base in building a sound career education.

Obviously the base will differ from career family to career family, but the answers to the following questions can serve as a guide in building the base for a specific family:

- What are the associate degree entry occupations in the career family?

Employees of local and state agencies enrolled at Manatee Junior College are involved in a role playing exercise relating to government operations.

- What common tasks are performed across the board in the entry occupations of the career family?
- What knowledge, skills, and behavioral patterns are needed to perform the common tasks in the career family regardless of occupations?
- What decision making techniques are needed by the employee at the associate degree level to perform the task?
- What learning processes must take place to accomplish the required knowledge and skill development?
- In what sequence should the learning processes occur?
- What type of practical field experiences must the student receive to prepare for employment?
- What educational service is needed to branch from the career family to a specific occupation?
- What prior experience relevant to the career family does the student have?
- What form of evaluation is needed to ensure quality education?
- What additional characteristics or qualities do the employers of the career family and/or civil service officials consider important in preparing the student for employment?

Specific Occupational Skills

As the student develops competencies required in a specific occupation, the generalized knowledge and skills of the base and career family complement the precise delivery techniques required. Although all three categories of skills must be developed in preparing a person for employment in the public sector, the latter category gives the employee his entry-level marketability. The skills for the specific occupation give the student access to initial employment, but sustained success in a position, and continuing promotion depend on the extent to which the employee develops public service base and career family skills.

In developing the occupational component, it will prove helpful to utilize an analytical format. Adherence to the following four-phase approach will assist in the development of the courses for specific occupational skills.

Entry Level Skills. Identify the occupation as specifically as possible; list the tasks to be performed upon entry into the occupation; identify the skills needed; make an appraisal of the student's present level of skill. Determine deficiencies by the difference between the skills required and the skills possessed; outline the educational experience needed to close the gap; specify the educational methods to be used; and develop liaison with employers to ensure employment.

Skills for Advancement. List the tasks to be performed at progressively increased levels of responsibility; identify the skills needed to perform the tasks at the higher levels of responsibility; outline the educational experience needed to develop the skills; specify the education method to be used. Structure evaluation procedures.

Analysis of Effectiveness. Review effectiveness of first two phases. If adequate skills have been developed, the student should seek employment. If skills are still inadequate, identify the remaining deficiencies. Outline educational experiences needed to correct the deficiencies, and specify the method to be used to correct them.

Recycling to Correct Deficiencies. Establish procedures for recycling of the student. Prescribe individualized corrective services. When deficiencies are corrected, employ the student.

Structuring an Associate Degree Program

As a community college proceeds to structure a public service associate degree program, the three components discussed should be included: public service base courses; the career family base course, including work experience; and the courses for development of skills for a specific occupation within a given career family. In addition, specialized supportive or foundation courses to build allied skills must be built into the program. Communications, citizenship, and intellectually stimulating electives are also essential. *Table VII* outlines a suggested allocation of credit hours for an associate degree program. A minimum of 60 credit hours is used as the frame of reference.

Additional courses may be added to meet local requirements. Furthermore, adjustment may need to be made to meet state or regional accrediting requirements. A greater emphasis on work experience, if found desirable, may also be built into the program. It should be noted that the program outlined in *Table VII* is intended to serve only as a guide for local program design.

Table VII

PUBLIC SERVICE ASSOCIATE DEGREE PROGRAM:
SUGGESTED ALLOCATION OF CREDIT HOURS

Program Component	Suggested Semester Hours	
Public Service Base		
Effective Delivery of Government Services	3	6
Public Personnel, Organization, and Operating Procedures	3	
Career Family Base		
Introduction to Specific Public Service Career Family (Community Development, Education Services, Government Agency Management, Human Services, Judicial Services, Public Finance, Resources Management, Transportation)	3	15
Supervised Work Experience in Career Family (in cooperation with appropriate public agencies)	12	
Specific Public Service Occupational Skills		15
Specialized Supportive or Allied Foundation Courses		9
Communications Courses		6
Citizenship Responsibility Elective		3
Intellectual Growth Electives		6
Total Semester Hours		60*

* Additional credit hours may be added to meet local or state course requirements or specific regional accrediting requirements. Some members of the task force strongly urged a greater proportion of the credit hours be devoted to supervised work experience in cooperating agencies. It was also recommended that credit be granted for significant work experiences and job training acquired prior to enrollment in the college.

A curriculum committee or an advisory group may wish to use the suggested program as a point of departure in local deliberations.

Granting of certificates for completion of components of the program should be considered. The college may wish to identify each component of the associate degree program as a certificate program. As the student successfully completes each component, the college may give recognition by granting a certificate. Such recognition often has a motivational effect on the student. Furthermore, the certificate may be converted to earning power in the labor market in the event that the student is unable to complete his associate degree.

[36] Letter to Andrew S. Korim from J. J. Donovan dated October 20, 1970.

[37] Fine, Sidney A. *Guidelines for the Design of New Careers.* Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research, September 1967. p. 8.

[38] Institute for Local Self Government. *Community College Programs for Public Service Occupations.* Berkeley, California: the Institute, October 1969. pp. 139-149.

[39] Institute for Local Self Government. *Some Who Dared.* Berkeley, California: the Institute, 1969. pp. 32, 43.

[40] Manchester Community College. *Manchester Community College Catalog 1970-1972.* Manchester, Massachusetts: the College, 1971. p. 123.

[41] American Association of Junior Colleges. *Occupational Education Bulletin.* Washington, D.C.: the Association, July 1970. p. 4.

5

Building a Delivery Capability

An increasing demand will be made upon educational institutions to account for their utilization of funds. Call it "cost benefit" or whatever; those in this new kind of community educational institution will be required to achieve a new precision in statements of objectives and obliged to give evidence of results in relation to dollars spent.

EDMUND J. GLEAZER, JR.
Executive Director
American Association of Junior Colleges [42]

All too often educational institutions have identified their responsibilities in career education as beginning and ending with instruction in a series of skills. Little concern has been shown for structuring instruction into a continuum. Program objectives have been loosely put together and the results seldom tested. Rarely has career education reflected a sophisticated approach to the analysis of labor market characteristics, community interests, and the potential of each person entering the institution. The adaptation of the resources of the institution to each person to maximize easy entry, optimal exit, recycling, and re-entry is by and large only a philosophical tenet. What each institution needs to do is build an *integrated delivery capability* which will improve the services to the student.

With accountability in education becoming a major concern, it becomes politically prudent for the community college to approach its operations as an integrated whole. Hopefully, this chapter will stimulate interest in maximizing the capability of the community college as a means of improving education and training for public service careers.

Determining Demand and Supply

The most critical consideration in building a sound system is the *ultimate placement of the students into careers* in the labor market. Both the demand for and the supply of associate degree level personnel must be ascertained. Unless the student can be placed into employment, the delivery system, although otherwise well constructed, will break down. Community college planners must guard against costly and embarrassing misinterpretations of the need for career education programs.

Statements of need for manpower are expressed in various forms. In identifying the demand for manpower in governmental operations, several variables should be studied. These include *advertised vacancies, unfilled budgeted positions, proposed but unbudgeted positions, observable gaps in governmental services,* and *broadly defined, long range, national and local economic and social goals.* One can safely assume that the farther down this listing one goes, the less certain is the current labor demand.

Advertised vacancies based on unfilled budgeted positions tend to be the most reliable expression of need, but the community college must determine the extent of the shortage expressed by particular government agencies. Job placement

is much more certain when the educational program is based upon persistently advertised vacancies. Education and training programs built solely on needs identified by gaps in governmental services and social and economic goals must be recognized as high risk programs. But these variables have to be considered in all long-range planning.

Although some sources of data identifying the national need for public service manpower are available, usually local demand will be difficult to ascertain. The continuous survey of demand for given career programs is becoming a major responsibility of the community college.

As the Department of Labor's Job Bank expands its coverage, community colleges may be able to rely upon the data in the bank as a basis for planning. The local offices of the State Employment Service in each state are valuable resource centers in matters pertaining to local job vacancies. Furthermore, the Cooperative Area Manpower Planning System (CAMPS) serves as a source of information on specific manpower needs in a given area.

It is essential to realize that demand for manpower is a highly complex matter. Not only does demand involve numbers of positions, but other specific information must be determined, such as: entry level, salary, skills needed, location of jobs, specific employers, duration of employment, and opportunities for advancement. This information will help colleges determine whether the so-called need for a program really means that job opportunities with a future are available for the associate degree graduate. These are the considerations that interest students trying to find their niche in the labor market. They should also interest the college staff.

Not only must the community college planner be concerned with the demand for manpower before embarking on the development of a program in public service, but he must also analyze the sources of supply of personnel for the occupations in a given career family. Information on what other community colleges, private schools, and high schools may be offering, and the flow of personnel from these sources should be determined. An attempt should also be made to locate information about surplus bachelor degree holders within a career family. The number of positions being filled by trained military personnel leaving service should be considered when analyzing the sources of supply.

The collection of data on manpower demand and supply, and the accurate analysis of that data, will provide a sound basis for judgments regarding student recruitment, career guidance, instruction, and job placement. So critical is a sophisticated approach to the determination of labor market characteristics that the college should give support to its efforts by organizing a *labor market review committee* as a part of its advisory inputs. Representatives on this committee should include officials from the local office of the state employment service, CAMPS, civil service agencies, and the appropriate employing agencies.

Structuring Career Education

Postsecondary education has characteristically specified the courses, the credits, and other details that must be completed to receive a grade, certificate, or degree. If a student meets the criteria, he leaves successfully. Rarely has the institution specified the obligations it has to the student to deliver services that will take the student from his present level of development and, by adding the proper balance of ingredients, move him toward his objectives. Too often the institution says to failing students, "You haven't met the criteria." Perhaps it might be more appropriate for the institution to say to a failing student, "The college hasn't done a good job for you so far; therefore, we must make the following adjustments." Walter E. Hunter proposes that we discover new strategies "to assure that *most* students achieve *most* objectives." [43]

By taking the various services of the college, adding some that are absent, and welding these services together into a logical sequence, with the possibility of starting over or transferring if necessary or desirable, the community college can offer its students a vertically and horizontally integrated system of education for public service careers.

A viable system will consist of certain components necessary to the successful development of skills. Each component must reflect the basic operational objectives to be attained by the college. Each phase of the system must contribute something specific toward the stated operational objectives. When the various components are integrated into a unified, continuous process that is worked into the regular routine of the college, the total delivery system for career education is formed.[44] When we apply the systems approach to career education, it tends to imply a computerized, dehumanized treatment of the student. This is not so. Actually, it is a well-planned approach, and

and this is exactly what's needed by students. The following steps are essential in structuring the system:

Specify the purpose or end result of the operations.

Identify the critical operational objectives which will lead to the end result.

Put the objectives into a logical sequence.

Develop the tasks and/or services by which the objectives will be reached.

Specify the details of delivering the tasks and/or services.

Establish the evaluation mechanism for each component.

Conduct the evaluation.

Correct the system as indicated by evaluation.

A suggested plan for the development of an integrated delivery capability for career education for public employment, with 18 operational objectives identified, follows.

Operational Objective	Task Service Module	Mode of Delivery
1. Link college with community	Communicate with informed groups	Establish public employer support group Obtain community input Obtain student input Survey career interests and labor market needs
2. Prepare institution	Mobilize resources	Allocate budget Brief staff and faculty Reserve plant and equipment Establish procedures
3. Reach the target population	Offer pre-admission outreach services	Involve elementary and secondary schools, social agencies, community groups Disseminate career literature Televise career orientation Establish off-campus outposts and mobile units Involve employer task force Elicit student and faculty support
4. Analyze student potential on an individual basis	Provide entry services	Evaluate life experiences of student Analyze aptitude, attitude and interest Diagnose latent potential
5. Assist student in making a career choice	Implement career selection services	Orient student to labor market Offer career materials exploring opportunities Computerize guidance process Set up career conferences Visit job sites Arrange employer visits to college Study Job Bank trends
6. Support transition of student into college	Establish liaison services	Encourage close support by staff Arrange coaching services Permit periodic recycling as needed
7. Reinforce student's potential	Prepare the learning foundation	Improve attitudes Eliminate academic deficiencies Sharpen learning skills
8. Prepare student for adaptability to employment in public sector	Develop public service skills and concepts	Study philosophy of public service Examine concepts of government organization Review civil service merit practices Analyze intergovernmental relationships Analyze functions at intermediate entry levels Review performance expectations Analyze operational strategies and decision making techniques

Operational Objective	Task Service Module	Mode of Delivery
9. Facilitate selection of specific public service career family	Analyze career options in families	Examine characteristics of career families Match student interests and aptitudes with career families and occupational specialties Select career family and occupational specialty
10. Prepare student for employment in career family	Develop career family skills and concepts	Examine concepts of career family Develop skills and competencies of career family Review performance expectations of career family
11. Develop marketable skills in occupational specialty of the respective public career family	Provide occupational skills development services	Structure learning experiences for occupational competencies Build allied tools Adjust for independent adaptations
12. Relate program to employment opportunities	Implement interplay with career field and the employing agencies	Arrange work experience Set up employer-student seminars Conduct field studies Visit employment sites
13. Develop effective communications	Offer communication skill development services	Provide exercises in speaking, listening experiences, technical reading and writing Provide reporting exercises Offer experience in graphic presentation
14. Develop citizenship	Orient students to social responsibility	Offer elective courses Encourage extracurricular activities
15. Provide for general intellectual growth	Offer personal intellectual development services	Offer elective courses Arrange seminars Involve student in government processes
16. Effect the disposition of student	Provide recycling or exit services	Recycle student if necessary Engage in job development Exit student into occupational entry or into other educational institutions under transfer agreements Give job coaching after employment Offer re-entry assistance if desired
17. Perform overall evaluation	Undertake follow-up activities	Visit employers Survey performance of graduates Consult advisory committees Consult with alumni
18. Involve graduate in advanced development	Continue educational development	Upgrade and update the graduate's skills Arrange alumni activities

Integrated Approach

The basic potential for growth varies from person to person, but the concept of a career education delivery system rests on the assumption that each person, through certain aptitudes, attitudes, interests, and other characteristics has the capacity for growth, and that by meeting a sequence of operational objectives, growth will take place.

The concept of an integrated career education delivery approach emphasizes the latent personal resources of an individual as potential for human development, and the education and training required to mobilize those latent resources. The individual must be able to synthesize his knowledge so that he becomes a productive citizen and a valuable member of the labor market. He should be prepared to return later for further education which can upgrade, update, or redirect his skills. In integrated career education the components of the system must work as a unified whole. Each operational phase should be open to evaluation.

Furthermore, the integrated approach facilitates a number of basic conditions essential to human growth. Operational objectives place emphasis upon accommodating students' individual needs, deficiencies, and capacities. Educational inputs are structured to permit easy entrance, progressive growth, recycling, orderly exit, and re-entry as these are necessary. In addition, the limitations of the traditional lock-step curriculum are reduced by treating the interaction between the student and his training as a continuous developmental process. Periodic assessment helps to identify changes needed to reduce failure.

With this approach, the student is recognized as an individual possessing personal differences and is given an opportunity to schedule a developmental pace consistent with his characteristics. In this way, the probability of a productive educational experience is maximized. The integrated systems approach promises to improve the performance record of educational programs developing people for government careers.

Implementing the Plan

The suggested plan for an integrated approach to public service education is only a skeleton. Actual implementation of the plan requires a commitment to the concept and acceptance of the related operational characteristics. Each college should identify which of the operational objectives may be pursued simultaneously and which may only be developed in sequential order. Peculiarities of each community college such as budget, size, faculty support, and community interest will dictate the extent to which the suggested plan may be implemented as well as the manner in which it will be carried out.

Effective operation of a career education system requires that certain criteria be met. Some of these are: (1) linkage with community agencies; (2) internal teamwork, by units within the college and within the public service education staff; (3) adequate articulation with the employing agencies through direct contact on a one-to-one basis with the personnel director and/or training director in the relevant operating agency through information exchange with civil service authorities, advisory committee meetings with employer representation, career conferences supported by employers, interchange between instructional staff and prospective employer supervisors, and contractual arrangements with cooperating employers; (4) opportunity for feedback from students; (5) integration of the various service components into a continuum; (6) employment for students upon graduation from college; (7) retention of employment after entry into labor market; (8) built-in evaluation of each service component; (9) procedures for revision after each service component of the delivery system is evaluated.

Table VIII gives a convenient worksheet which may be useful in analyzing the extent to which each of the operational objectives has been implemented. The total system must be tested periodically for effective delivery and operations must be modified accordingly.

Special attention should be given to staff selection. The best designed system becomes a paper system without career guidance personnel, faculty, and administrators who have the missionary zeal needed to perform effectively. The staff must be capable of fulfilling the specified operational objectives. And if the students are being poorly served, the staff must be willing to redesign the system.

Some Applications

Systems concepts can be applied to education at various levels. At the instructional level, each course within a given program is designed with a set of *behavioral objectives* specified. Learning experiences are structured in such a way as to produce these behavioral patterns. Outcomes are then tested against the behavioral objectives. In the case of a specific program within an institution, *operational objectives* are developed and the various parts of the total system are structured in such a way as to achieve the operational objectives. In this case, much as in the case of the behavioral objectives for a given course, the total outcome must be tested against the operational objectives. The systems approach may be applied to specific courses, to the entire institution, or to a total system of institutions within a district or a state. Some examples of the application of systems concepts follow.

The Division of Community Colleges of the Florida Department of Education and the Board of Regents of the Florida State University System have undertaken a joint project to employ systems concepts. The project promises to result in the development of a well integrated system of manpower development. Under the direction of a project coordinator, a curriculum specialist and a manpower specialist have the responsibility to design and implement a systems approach to the preparation of human service personnel. The

Table VIII

ANALYSIS OF DELIVERY OF CAREER EDUCATION SERVICES

Operational Objectives	Extent of Implementation										
	Not considered	Considered but not planned	Tried but abandoned	Poor delivery will abandon	Planned but not budgeted	Planned and budgeted	Initial year of operation—no trend	Poor delivery will revise	Intermediate level of effective delivery	Effective delivery	Annual expenditure
1. Link college with community											
2. Prepare institution											
3. Reach the target population											
4. Analyze student potential on an individual basis											
5. Assist student in making a career choice											
6. Support transition of student into college											
7. Reinforce student's potential											
8. Prepare student for adaptability to employment in public sector											
9. Facilitate selection of specific public service career family											
10. Prepare student for employment in career family											
11. Develop marketable skills in occupational specialty of the respective public career family											
12. Relate program to employment opportunities											

	Not considered	Considered but not planned	Tried but abandoned	Poor delivery will abandon	Planned but not budgeted	Planned and budgeted	Initial year of operation—no trend	Poor delivery will revise	Intermediate level of effective delivery	Effective delivery	Annual expenditure
13. Develop effective communications											
14. Develop citizenship											
15. Provide for general intellectual growth											
16. Effect the disposition of student											
17. Perform overall evaluation											
18. Involve graduate in advanced development											

system is being structured to attain predetermined skill-oriented educational goals consistent with employer requirements. Opportunities to maximize interaction by community colleges, universities, employing agencies, civil service authorities, related associations, and other parties having a vested interest are being built into the system. A number of community colleges in Florida are adapting their local operations in order to become a part of the state-wide system. Once progress is made with the human services career family, other career families will be similarly treated.[45]

As a companion effort, the Department of Administration, Florida Division of Personnel and Retirement, has established the State Government Cooperative Education Program. The program provides college students with the opportunity to alternate terms of on-the-job training in state agencies and terms of full-time academic studies. Any state agency wishing to participate files with the State Director of Personnel and Retirement a list of positions by major field of study in which the students would be employed. The participating colleges process student applications directly with the employing agencies.[46]

The application of the systems approach to education is not new to many colleges. In some cases, it takes the form of a partial application. For instance, at Brookdale Community College, Lincroft, New Jersey, courses for the mental health technician and teacher aide are designed to meet specified behavioral objectives. The accomplishments of individual students are tested against the behavioral objectives, and, if necessary the student takes more coursework to acquire an acceptable level of accomplishment.

On the other hand, at Bellevue Community College, Bellevue, Washington, an integrated system of planning, curriculum design, budgeting, and program implementation and evaluation, is being established in conjunction with local employers. The number of students allowed to enroll in each of the public service career programs is dependent upon information from public agencies, including the user agencies and the Cooperative Area Manpower Planning System. The Bellevue system is basically one of resource allocation resting on the concept of jobs first.[47]

[42] Gleazer, Edmund J., Jr. "The Community College Issues of the 1970's." *Educational Record*. Washington, D.C.: American Council on Education, Winter 1970. p. 52.

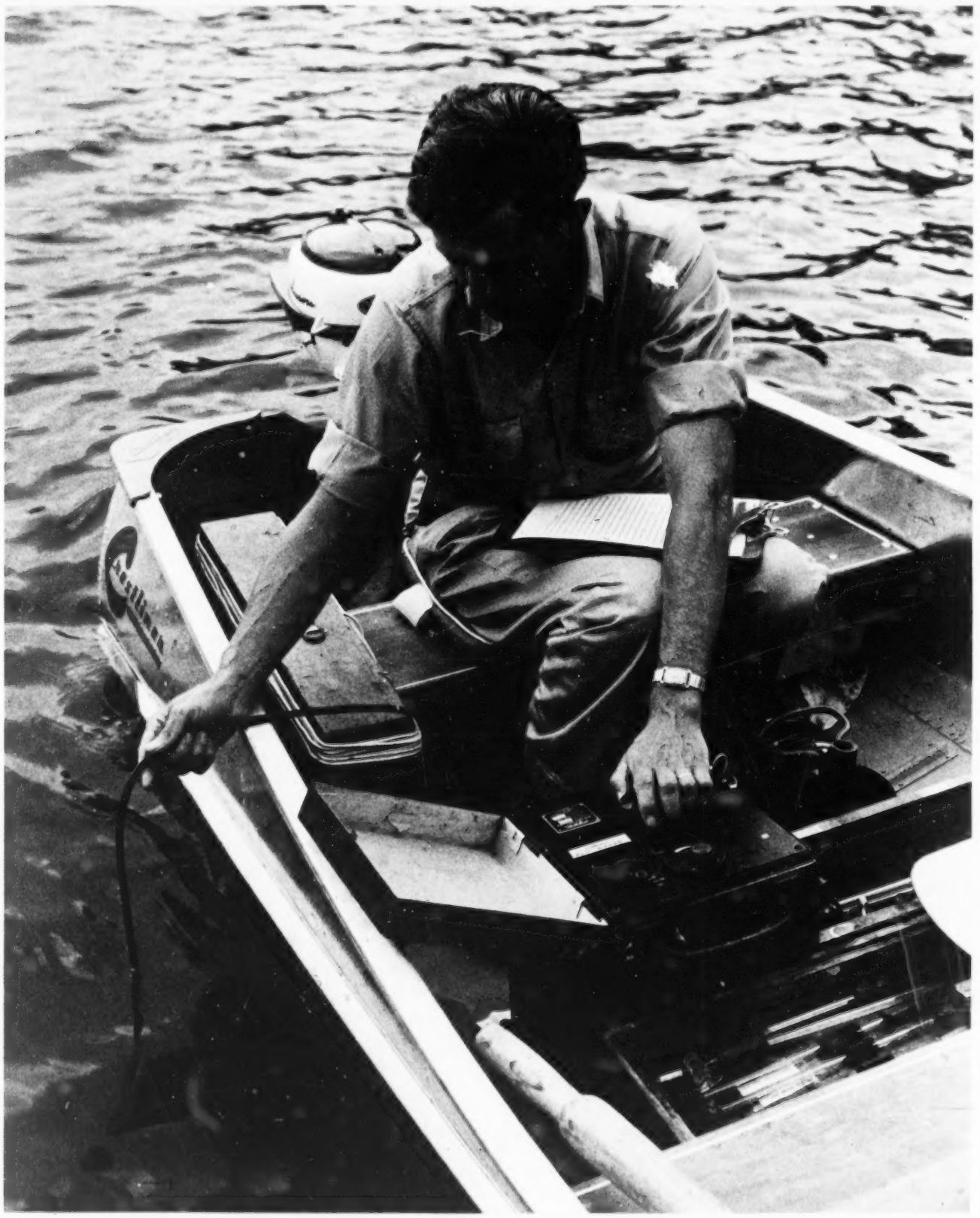
[43] Hunter, Walter E. *A Systems Approach to the Instructional Process: A Report to the Esso Education Foundation*. St. Louis, Missouri: Meramec Community College, February 1970. p. 7.

[44] Wiley, Wretha W. and Fine, Sidney A. *A Systems Approach to New Careers.* Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research, November 1969. p. 27.

[45] Information concerning this project was obtained by interviews with personnel of the Florida Division of Community Colleges and the Board of Regents Florida State University System.

[46] Florida State Department of Administration. *Cooperative Education in State Government.* (Leaflet) Tallahassee, Florida: the Department, no date. 5 pp.

[47] Information gathered during interviews with staff of respective colleges.



A game technician testing water temperature, acidity, and oxygen content at Bark Camp Lake, Virginia.

6

Improving Organization and Administration

Developing an organizational structure that provides optimal educational services to the community at minimal cost is one of the main challenges facing community colleges today. This balance is not easily achieved. The way career programs develop is usually reflected in the organizational structure. Often inefficient organizational patterns emerge. How this happens, and some examples of alternate organizational arrangements are discussed in this chapter.

Emergence of Departments

Program development in community colleges, especially in the new and emerging career areas of public service, usually follows an organizational pattern similar to most risk ventures. Once need is recognized, community interest is tested by offering a single course on a certificate basis. If this test of the market produces an adequate enrollment, additional courses are added, and eventually a two-year associate degree program may become a reality. In other cases, county, city, or state governments may request that the college provide training and education under a short-term contract with a guaranteed enrollment. Eventually, these services may become regularized as certificate or associate degree programs and offered routinely. At best, under such exploratory or special conditions, a program coordinator is appointed. This person probably also serves as the instructor of the courses. As enrollment grows, more faculty members will be added and a department chairman designated.

This process repeats itself as new public service occupations are added resulting usually in the emergence of several departments. Obviously such organizational growth is costly and presents managerial problems. Usually a reorganization must take place to bring about that delicate balance which allows sound management principles to be practiced.

Unification of Departments

The strength of a community college in public service education is fragmented by the development of a separate department for each public service program. Initially, program innovation encounters a minimum of organizational hierarchy. As new programs emerge, the management span extends horizontally. At some point, however, unification becomes desirable. This point is reached when the management span grows beyond effective communication and control. Only by a

unification of the program units into a single department can sound principles of management be established.

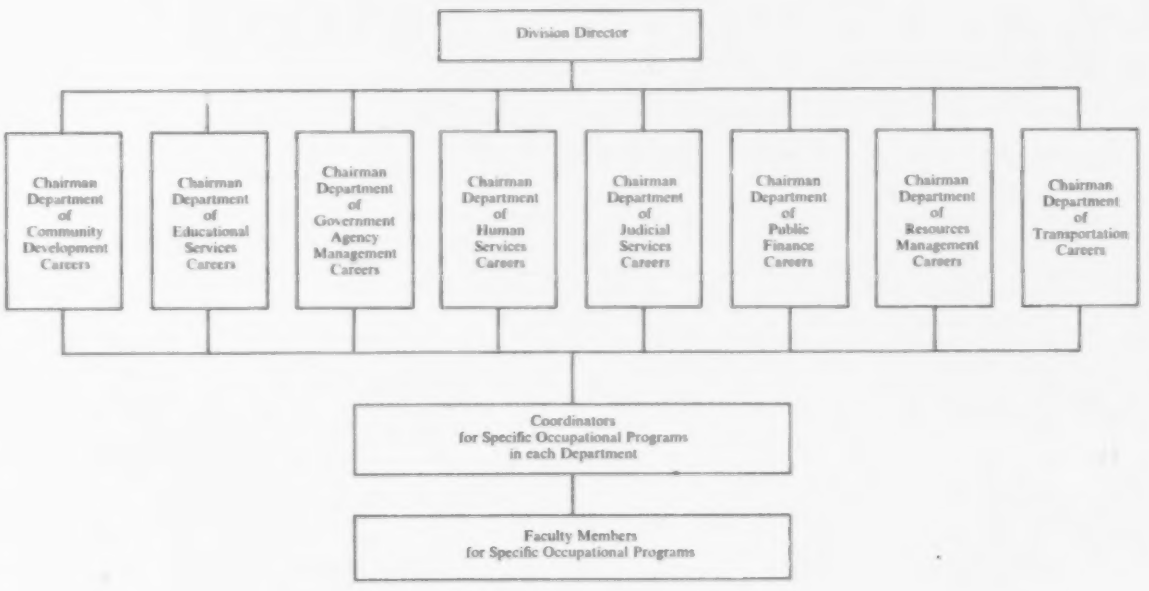
An example of the unification of departments is found at Prairie State College, Chicago Heights, Illinois, which has organized a Department of Public and Personal Services with a director as the chief administrator of the department. This department has responsibility for occupationally oriented associate and certificate programs in such categories as teacher aide, mental health technician, social service aide, child care worker, and police and fire science specialist. Each of these occupational areas is administered by a program coordinator with responsibility for scheduling courses, faculty assignments, supervision of work experience, communication with employers, and placement. Program coordinators report to the director of the department.[48]

At Prairie State College, overall responsibility for all of the career programs within the area of public and personal services rests with the director of the department. The director assists program coordinators and has responsibility for identifying new program needs and for their initial program development and implementation. Furthermore, the director works closely with other program directors and other units of the college in order to secure their services and assistance. The director reports to the dean of occupational services.

The general scope of the director's responsibilities is broad. It includes community relations activities, developing and maintaining relations with agencies that are likely to utilize

Figure 1

Suggested Organizational Chart for Division of Public Service Career Programs


Division Director
Chairman Department of Community Development Careers
Chairman Department of Educational Services Careers
Chairman Department of Government Agency Management Careers
Chairman Department of Human Services Careers
Chairman Department of Judicial Services Careers
Chairman Department of Public Finance Careers
Chairman Department of Resources Management Careers
Chairman Department of Transportation Careers
Coordinators for Specific Occupational Programs in each Department
Faculty Members for Specific Occupational Programs

These future policemen enrolled in the Public Service Institute of Loop College are combining coursework with recruit training.

graduates of the various programs, and interpreting the program area to other segments of the college. The director evaluates members of his staff, assists program coordinators in student recruitment and placement, and performs a variety of other administrative functions.

The departmental approach offers a growing community college with several programs in public careers, a structure for the effective performance of management and supervisory functions.

As the number of faculty members in the department increases in response to growing enrollments, a further reorganization may be necessary. A division of public service career programs may be required. Ideally, this division would consist of departments reflecting the eight public service career families previously suggested. *Figure 1* provides an organizational chart for the divisional approach; full implementation would be justified only to the extent that growth in enrollments dictated organizational expansion.

The Multi-Unit Approach

The development at City Colleges of Chicago serves as an example of a multi-unit approach to organizing public career programs. Through local college initiative and city wide coordination, a concentration of occupational programs developed in the colleges of the Chicago system.

Kennedy-King College, formerly Wilson Campus, emphasized programs for social service assistants, child development specialists, and teacher aides which became the nucleus for the Human Services Institute. Concurrently, the Loop College, in cooperation with the Chicago Civil Service Commission, created a wide range of programs for employees of city government, which were organized into the Public Service Institute, headed by a director. Both institutes have served as a mechanism by which programs have been developed and coordinated throughout the multi-college system. The Human Services Institute presently coordinates programs at seven of the City Colleges of Chicago, and the Public Service Institute at four colleges. At the satellite colleges, the programs are administered by a department head. If only one public career program exists, a program coordinator is assigned the administrative responsibilities associated with that program.

Although the development of public service education tended to center in two colleges, the

target area has been the entire city of Chicago. Because of their program experience, large enrollments, and city-wide orientation, Kennedy-King and Loop Colleges were designated as institute centers with the directors functioning at the dean level. Although based at one of the colleges, the institute directors extended their responsibility beyond the primary college. They provided developmental assistance, coordination, and maintenance of standards in satellite developments within their particular fields in other colleges in the system. The development has come to be labeled the "institute concept."

The institute concept tends to be a compromise between comprehensiveness and unit specialization. It reflects what developed as a response to community and city needs in the Chicago multi-unit structure. It permits centering in one college the basic city-wide responsibility for education and training for a given segment of public sector careers, and the expansion of satellite developments at other colleges. The institute accepts responsibility for students from all parts of the city either in the initial college location or else at satellite locations. It also accepts basic responsibility for offering a full-range of curriculums in public careers, ranging from short-term courses for employed personnel to full two-year associate degree programs. The "program ladder" thus provided makes it possible for a student with any combination of motivation and ability who is interested in a public career to find a compatible point of entry and then to move vertically up the educational ladder or into other specialties.[49]

Small Private Colleges

A number of private junior colleges have developed programs in public service education. Their heritage of a strong social focus serves as a foundation for entry into these programs. With a limited base, a small private junior college may embark upon an extension of rather traditional activities into career families such as human or educational services. Developments at Presentation College, Aberdeen, South Dakota, illustrate this point. New programs have been developed out of existing departments by academic staff members at Presentation. Freed-Hardeman College, Henderson, Tennessee, is inaugurating programs for the teacher aide, library technician, recreation aide, and social worker aide as a means of broadening the options available to students. The programs will be administered within existing departments.[50]

Generally speaking, in the case of the small college, it is not feasible to create new departments for new programs. Instead the programs may be administered as integral parts of existing departments. Often a workable arrangement for the administration of single courses is to place them under the supervision of the director of adult and continuing education.

Private junior colleges like Presentation and Freed-Hardeman have found that they have opportunities to become more comprehensive with the development of occupationally oriented programs in public careers. However, they need not undertake costly organizational changes. In cases where local community need and interest are not adequate to support programs like the ones described, the feasibility of recruiting on a national basis should be explored—provided low cost rental of residential quarters is available to the student in the community, or the college operates residential halls. Small public community colleges in areas of low population density may find this a workable approach.

Autonomous Career College

Occupational education in community colleges has developed in four reasonably distinct groupings. These reflect basic functional service areas: industrial and engineering technology; business, secretarial science, and data processing; health occupations; and public service occupations.

For a community with a virtually inexhaustible student base, such as one would find in huge urban communities, John Grede proposes four educational units, each committed to one of the four functional areas and each operated as an autonomous career college. These units should not be located in particular residence neighborhoods but rather in or near the central city. They should be on the major arteries of public and private transportation, easily accessible to all parts of the city, and on neutral ground in relation to any racial or ethnic group concentration. In this way they truly become community colleges rather than neighborhood schools, since the smallest realistic community for business, industrial, and government job opportunities is the entire city.[51]

The autonomous college approach as described by Grede permits career objectives rather than vague educational objectives to be emphasized in program development, as well as in recruitment and guidance activities, staff assignments, and the

Joint city-college planning of internship curriculum is an important aspect of the El Camino College local government careers program. Shown are an intern, an assistant city manager, an employee and former intern, and a program director.

allocation of funds. This is more closely aligned with student interests, since almost all community college students are interested in a career whether it be started after one course, one year, two or four years of college or even pursued concurrently with education and training coursework. The other alternative, the prevalent community college pattern organized along educational discipline lines, is relevant only to academic faculty and to senior institutions with discipline-oriented research objectives. The somewhat artificial and usually divisive issue of transfer versus occupational education splits faculty and causes students to make unrealistic decisions.[52]

A number of private trade schools and business colleges offering associate degree programs operate on the principle of the autonomous career college. The experiences of these institutions may serve as guides to the establishment of an autonomous public service career college within a sizeable comprehensive community college system.

Organization

Several patterns of organization for career education for public service occupations have been suggested for different combinations of circumstances. Each local community college is faced with a different set of factors than those expressed in the various cases. In the final analysis, the type of organizational structure that may be feasible for a given community college will depend upon the local limiting and permissive factors. These are some:

- The extent of the commitment by the college to programs for public service careers.
- The stage of development of the college.
- The success of programs as reflected in student interest, enrollment patterns, job placement record, etc.
- The population density of the district served by the college.
- Availability of funds to support programs.
- Availability of work experience stations in agencies in the community.
- Career opportunities for graduates of the programs.
- The extent of community involvement.
- The characteristics of the faculty.
- The extent of the employer cooperation.
- The extent to which sound principles of management are practiced in the operation of the college.

- The governmental structure of the community served by the college.

Using these limiting and permissive factors as a frame of reference, certain basic principles should be singled out and applied in developing the organizational structure for public service career education. These include:

- Keep the span of control at any one level at a manageable number of people.
- Set up instructional departments along functional lines reflecting distinct public service career families.
- Identify communication channels within each department and between departments within the college.
- Develop a job description for each member of a department.
- Establish channels of communication between the instructional departments and other service units of the college.
- Identify a person to be responsible for establishing arrangements with employers of the public sector.
- Identify a person to be responsible for developing sources of funds for the department.
- Develop a system for periodic internal audit.
- Summarize the various lines of communication and relationships between units in an organizational chart.
- Modify the structure periodically to overcome weaknesses as they appear.

Regardless of the particular emphasis a community college may follow, these principles, if practiced, will provide the basic conditions for successful management of the total program. The delivery of services to students will be maximized, and the possibility of internal staff conflict and frustration will be minimized.

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[48] American Association of Junior Colleges. *Occupational Education Bulletin,* Vol. 3, June 1970. Information received by interviewing the staff and faculty at Prairie State College.

[49] Grede, John F. "Collective Comprehensiveness: A Proposal for a Big City Community College." *Journal of Higher Education.* Vol. XLI, Number 3, March 1970. pp. 179-194.

[50] American Association of Junior Colleges. *Occupational Education Bulletin,* Vol. 5, October 1970.

[51] Grede, John. "Collective Comprehensiveness." pp. 179-194.

[52] *Ibid.* pp. 179-194.

7

Government Activities and the Community College

Meaningful information is the open sesame of Federal assistance programs. The lack of it handicaps everyone. . . . It is up to the Federal Government to provide such information now.

WILLIAM V. ROTH, JR.
U.S. House of Representatives[53]

Community colleges are increasingly being merged into the service systems of various local, state, and federal governments. When government employees require education and training, community colleges can provide the necessary programs.

Community colleges have several characteristics which make this possible. They often have an open door admission policy and generous student personnel services. Usually, overhead costs are low. They offer a wide range of programs and educational services which are integrated with career possibilities, especially those in the local community. Often, they have job placement services.

A number of government programs enable community colleges to have an extensive involvement in community affairs. Some of the possibilities are reviewed in the following sections. Although the programs considered reflect national goals and federal legislation, city, county, and state agencies have the burden of implementing the programs locally. As a local institution the community college plays a strategic role.

Civil Service Agencies

Early in the development of a public service program a working relationship should be established between the community college and the civil service agencies. A number of questions concerning civil service practices and procedures must be answered in the developmental phase of any program designed to prepare for government employment. The following are some of the basic questions:

Do civil service regulations apply to the occupation being considered?

What prerequisites are required for the occupations?

What are the procedures for filling openings?

What form do the examinations take?

What are the notification procedures related to test results?

Does the civil service agency recognize one and two years of college preparation as a qualification for employment?

Does the civil service agency operate a training program covering target occupations?

What is the procedural relationship between the civil service agency and the operating agencies?

Table IX

PROGRAMS OF SOCIAL AND REHABILITATION SERVICE (S.R.S.)

Target Population	Authorizing Legislation	Programs	Federal Administration	State Administration
Older Americans	Older Americans Act of 1965 (PL 90-42) Act Amendments of 1967 (PL 90-42)	Grants to states for community planning, delivery of services, training of personnel, manpower studies, and curriculum development	Older Americans Service Division, Administration on Aging, S.R.S.	State agency on aging
Recipients of Old Age Assistance	1962 Amendment to Social Security Act (PL 87-543)	Grants to states for community planning and social services	Older Americans Service Division, Administration on Aging, S.R.S.	State department of public assistance
Youths	Juvenile Delinquency Prevention and Control Act of 1968 (PL 90-445)	Grants to assist states and localities: to prepare plans for prevention and control of juvenile delinquency; to provide diagnosis, treatment, rehabilitation, and preventive services; to train specialists.	Office of Juvenile and Youth Development, S.R.S.	
Handicapped Persons	Vocational Rehabilitation Act of 1954 (PL 565) Vocational Rehabilitation Amendments of 1965 (PL 89-333)	Grants to provide improved rehabilitation service to handicapped persons, demonstration of improved procedures, training of specialists	Office of Research, Demonstration, and Training, S.R.S.	State Vocational Rehabilitation Agency
Social Work Manpower	Social Security Act as amended by Social Security Amendments of 1967	Grants to colleges to develop, expand, and improve programs to prepare social services personnel	Division of Training and Manpower Development, S.R.S.	
Public Assistance Personnel	Social Security Act, as amended by Public Welfare Amendments of 1962, Social Security Amendments of 1965	Grants to states to train personnel employed by state or local agencies and administering public assistance plans (provide for educational leaves for employees, stipends for persons preparing for employment, grants to educational institutions, coverage for agency costs of inservice training)	Division of Training and Manpower Development, S.R.S.	State directors of departments of public welfare or social service
Children	Social Security Act (PL 90-248)	Grants to educational institutions providing training for students for work in field of child welfare (teaching grants, trainerships, short-term training activities)	Children's Bureau, S.R.S.	
Families with Dependent Children	Social Security Act (PL 90-248)	Grants to states to improve social services to families with dependent children and to train staff to provide such services	Children's Bureau, S.R.S.	State director of public assistance

Target Population	Authorizing Legislation	Programs	Federal Administration	State Administration
Families Needing Child Care Services	Social Security Act (PL 90-248)	Grants to states to provide for child care services to work-incentive participants, adults in training, or adults employed.	Children's Bureau, S.R.S.	State public welfare agency

Are any operating agencies which employ persons for the target occupations exempt from civil service procedures?

If a target occupation is civil service exempt, how is the position filled?

What is the timing for recruitment and hiring, and how does this relate to the college calendar?

As might be expected, civil service practices vary from state to state, from county to county, and from city to city. In a given metropolitan area such as Seattle, Kansas City, Los Angeles, or Chicago, there are literally dozens of different government jurisdictions whose hiring practices have little relationship to one another. Inasmuch as each county, city, and state civil service agency operates under ground rules pertinent to its legal authority, it is essential that the community college investigate each one for its uniqueness, personnel needs, and scope of jurisdiction.

The central personnel agency of the federal government is the U.S. Civil Service Commission. A network of 65 area offices of U.S. Civil Service Examiners is available to help community colleges improve career guidance relative to federal service.

The Junior Federal Assistant Examination administered by the U.S. Civil Service Commission, is a broad aptitude test designed to measure one's ability to learn and to adapt to the duties of federal positions. The

Table X

U.S. OFFICE OF EDUCATION PROGRAMS

Program	Authorizing Legislation	Federal Administration	State Administration	Assistance
Occupational training for unemployed and underemployed persons	Manpower Development and Training Act of 1962, as amended	Division of Manpower Development and Training	State Department Of Vocational Education	Allowance payments to eligible persons. Institutions are reimbursed for costs
Vocational education research, pilot, and demonstration projects, and curriculum development	Vocational Education Amendments of 1968	Division of Comprehensive and Vocational Education Research	State Department of Vocational Education	Contracts and grants to state and local institutions
Vocational education programs, cooperative education, curriculum development, and program innovation	Vocational Education Amendments of 1968	Division of Vocational and Technical Education, Bureau of Adult, Vocational, and Library Programs	State Department of Vocational Education	Grants to state and to local institutions

Program	Authorizing Legislation	Federal Administration	State Administration	Assistance
Training personnel in library technology	Higher Education Act of 1965, (PL 89-329)	Division of Library Programs, Bureau of Adult, Vocational, and Library Programs		Grants to institutions planning library education programs
Support personnel for elementary and secondary teachers	Education Professions Development Act (PL 90-35)	Support Personnel Branch, Bureau of Education Professions Development (B.E.P.D.)		
Preschool, elementary, and secondary teacher aides	Education Professions Development Act (PL 90-35)	State Programs Branch B.E.P.D.	Chief state school officer	Grants to states
Special education classroom personnel	Education Professions Development Act (PL 90-35)	Special Education Branch, B.E.P.D.		Grants to state and local institutions
Talent search program for disadvantaged students	Higher Education Amendments of 1968 (PL 90-575)	Talent Search and Student Special Services Branch, D.S.S., B.H.E.		Contracts with state and local institutions
Upward bound program for disadvantaged students	Higher Education Amendments of 1968 (PL 90-575)	Upward Bound Branch, D.S.S., B.H.E.		Grants to institutions for stipends to eligible students
Career opportunities in school serving low income families	Education Professions Development Act (PL 90-35)	Career Opportunities Program, B.E.P.D.	State coordinator of career opportunities program	Grants to school systems to cover recruiting, training, and administration costs
Special services for disadvantaged students	Higher Education Amendments of 1968 (PL 90-575)	Talent Search and Student Special Services Branch, Division of Special Services, Bureau of Higher Education		Grants for special support services
Higher education work study	Higher Education Amendments of 1968 (PL 90-575)	Work-Study Branch, Division of Student Financial Aid, Bureau of Higher Education		Compensation of eligible students
Environmental education, curricula development, pilot and demonstration projects, training public service personnel	Environmental Education Act of 1970 (PL 91-516)	Office of Environmental Education		Grants to and contracts with educational institutions, public and private agencies

examination gives credit for one and two years of postsecondary education.

Under the Intergovernmental Personnel Act of 1970 (PL 91-648, January 5, 1971) provisions are made to strengthen the personnel resources of state and local governments; the U.S. Civil Service Commission is authorized to make grants to state and local governments for the purpose of training and developing their professional, administrative, and technical employees and officials. Organizations other than state and local governments may apply for training grants under Title III.

Also included in the Act are provisions authorizing the U.S. Civil Service Commission to make government fellowship grants to state and local governments for their personnel. These grants may cover costs of books, travel, transportation, and related expenses of the fellowship recipient. Payments may be made to educational institutions involved in the fellowship program.

Community colleges interested in exploring the possibility of participating in the programs authorized under this Act should contact the personnel officer of their local or state government or the local office of the U.S. Civil Service Commission. The Act represents a major effort to improve the quality of personnel of state and local governments by utilizing the services of the U.S. Civil Service Commission. The community colleges are likely to become the major training sources for local and state governments participating in the program.

U.S. Department of Health, Education, and Welfare

Of all the federal agencies, the U.S. Department of Health, Education, and Welfare has perhaps the most complex array of possibilities for community college involvement. Because of the breadth of the Department's activities, the opportunities for participation by community colleges are often less obvious than in other cases.

The Social and Rehabilitation Service administers a number of programs designed to improve services for specific target populations. Community colleges interested in preparing personnel for careers related to these programs should review the possibilities with appropriate agencies. *Table IX* provides a brief analysis of the various programs by target populations.

Programs under the administration of the Office of Education are also numerous. The major sources of assistance are listed in *Table X*. Of the various sources of funds, state vocational education agencies operating under the Vocational Education Amendments of 1968 are structured to provide regularized financial support for programs in public service education. Community colleges should file applications with their state director of vocational and technical education to participate in the funding earmarked for postsecondary education. Certain proposals may be submitted directly to the Bureau of Adult Vocational and Technical Education of the U.S. Office of Education.

Planning assistance from vocational education consultants is usually available to interested colleges through the state vocational education agency.

Comprehensive Manpower Services

The U.S. Department of Labor has the responsibility for several programs such as the Public Service Careers Program, Work Incentive Program, the computerized Job Bank and other programs which have a direct relationship to public service career education activities in community colleges.

Public Service Careers is a manpower program created to secure, within merit principles, permanent employment for the disadvantaged in public service agencies and to stimulate upgrading of current employees, thereby meeting the needs of the public.

Four training plans are currently active in the Public Service Careers Program:

Plan A—Entry and upgrading in state, county, and local governments

Plan B—Employment and upgrading in grant-in-aid programs

Plan C—New careers in human services

Plan D—Entry and upgrading in the federal service.[54]

A summary of the four plans is found in *Table XI*. Community colleges may wish to explore the possibility of serving as subcontractors as a means of providing education and training to the agencies participating in the program.

The Work Incentive Program, otherwise known as WIN, is designed for people who have attained age 16, who are getting payments under Aid to

Table XI

SUMMARY OF PUBLIC SERVICE CAREER PLAN

MANPOWER ADMINISTRATION
U.S. DEPARTMENT OF LABOR

Plan	Sponsors	Clients	Program Concepts
Plan A: Entry and Upgrading in State, County, and Local Governments.	State, county, and local governments, and independent special districts.	Entry jobs are restricted to "disadvantaged" persons. Upgrading emphasis is on low income persons.	Federal funds are available to cover the extraordinary costs of removing institutional and individual barriers to employment of disadvantaged persons and upgrading of current employees. Sponsor pays participants' wages. Hire now, train later.
Plan B: Employment and Upgrading in Grant-in-Aid Programs.	Same as in Plan A, but must be recipient of Federal grant-in-aid funds. Sponsors will be invited by the Federal grant agency to submit proposals.	Same as in Plan A.	Agreements negotiated at national level between DOL and various Federal agencies to build manpower components onto grants-in-aid. After initial arrangements, individual projects will be negotiated. Basic concepts are as in Plan A.
Plan C: New Careers in Human Services.	Human Service agencies—governmental and private non-profit.	Same as in Plan A although there is no provision for upgrading of current employees. New Careerists are those upgraded.	Standards are those of present New Careers Program. Wage supplement funds are provided. Projects will be largely limited to ongoing non-Concerted Employment Program New Careers projects.
Plan D: Entry and Upgrading in the Federal Service.	Federal agencies.	As determined by the Civil Service Commission or the agency. Criteria will be similar to "disadvantaged." Upgrading will focus on lower level employees.	Additional employment opportunities to be provided through worker-trainee supplement exam and through new apprenticeship recruitment methods.

Source: *Public Service Careers Program: A General Description,* Manpower Administration. Washington, D. C.: U.S. Department of Labor. August, 1965. p. 2.

Families with Dependent Children and who, as a condition of the payments, may be required to report for work training or for a job. WIN has been established to help them get the training or job they need. The program is operated through the local offices of the State Employment Service.

The program helps people to learn what work they can do and what work they want to do. Some persons are placed into public service occupations. WIN will provide the education and work experience needed. It also will help with any personal problems that interfere with getting and holding a job. Community colleges are urged to explore the possibility of cooperating with local WIN operations.

The Department of Labor, in selected population centers in the nation, has developed a computerized Job Bank. The Job Bank is utilized as a system of recording on a day-to-day basis the vacancies in a large number of positions, some of which are in the public sector. The information is updated every day and a picture of the demand side of the labor market is printed daily. This information could be extremely valuable to community colleges trying to determine the demand for personnel and is, therefore, a useful tool in developing

Increasing air traffic requires an ever growing number of specialists. Many community colleges offer programs to prepare such specialists.

programs and in giving career guidance to students.

The Cooperative Area Manpower Planning System (CAMPS) involves several agencies. Emphasis is placed on coordinated manpower planning. Agencies of local, state, and federal governments are represented on area manpower coordinating committees. These committees are linked to the National Manpower Coordinating Committee, which prepares national program goals for each fiscal year. CAMPS is a valuable source of information on manpower needs and should be helpful to community colleges.

The local offices of the State Employment Service in each state offer many services that complement community college programs. These services include: aptitude testing, occupational counseling, outreach, job referral, job development, and prevocational orientation, among others.

Community colleges interested in establishing linkage with these programs and services may contact the local offices of the State Employment Service or the regional representative of the Department of Labor.

Community Action Agencies

The Office of Economic Opportunity, through Community Action Agencies, as established under the Economic Opportunity Act, has the responsibility of focusing on poverty and mobilizing

> . . . all available local, state, private and federal resources upon the goal of enabling low-income families and individuals of all ages in rural and urban areas to attain the skills, knowledge and motivations and [to] secure the opportunities needed for them to become fully self-sufficient.[55]

A number of programs are conducted locally by Community Action Agencies. The following are some of the elements with potential for community college linkage: job development, placement and follow-up; prevocational and vocational training; guidance, testing and counseling; tutorial and remedial education; special education; adult basic education; family planning; home management instruction; social service counseling; and day care activities.

The community college through its expertise in community oriented instructional and student personnel services has considerable potential in

cooperating with these and other targets of Community Action Agencies.

> Community colleges and Community Action Agencies share in a number of key characteristics and interests: both are relatively new and innovative; both are geared to the needs of localities; both are working on institutional change on the socio-economic scene against the inertia of status quo traditionalism in universities, professions and the general job market. This clear mutuality of interests implies that the community colleges and Community Action Agencies should join together on many ventures. . . .[56]

Community colleges interested in exploring the possibility of entering into contract to provide such services should contact the local Community Action Agency. In addition, it may be desirable to indicate that interest to the regional and/or headquarters offices of the Office of Economic Opportunity. The state agency(s) responsible for these activities is also an important source which should be contacted; but it should be noted that the structure varies from state to state.

U.S. Department of Housing and Urban Development

At least three aspects of the operations of the U.S. Department of Housing and Urban Development (H.U.D.) provide community junior colleges with an opportunity to participate. These are the Community Development Training Program, the Comprehensive Planning Assistance Program, and the Model Cities Program.

The Community Development Training Program (authorized by Title VIII of the Housing Act of 1964, as amended) is a 50 per cent matching grant program to states enabling them to provide educational and training opportunities for persons in, or about to enter, public service in community development fields. It is designed to assist state and local governments to equip themselves with the caliber of community development personnel necessary to meet the demands of modern urban administration, technology, and human services. A considerable percentage of Title VIII funds during its three years of funding have gone to institutions of higher learning. This program presents, therefore, a broad opportunity for community junior colleges, which, so far, have not been involved as participants in the program to any significant degree.

The procedures of the program are as follows: Early in each fiscal year, the regional offices of H.U.D. are notified of the level of funding for their states and the priority areas in which training is to be undertaken and developed during that particular year. The regions, in turn, notify the agency in each state which has been designated by the governor to participate in the Title VIII program. The states then proceed to develop an annual plan for which they will request Title VIII assistance.

Colleges which have not been involved in the Community Development Program and would be interested in participating should contact the designated agency, discuss the state's goals, objectives, and prior activities within the training area, and, if appropriate, negotiate for participation. Since the program is a matching one, an indication of the ability and willingness to provide part of the nonfederal match would be advantageous to the institution. Further information on the program is available from any of the H.U.D. regional offices or the state designated agencies.

The Comprehensive Planning Assistance Program (authorized by Section 701 of the Housing Act of 1964, as amended), although primarily a planning assistance program, does support some training activities. Under its special projects activities, it has encouraged several planning agencies to undertake work study programs in conjunction with local educational institutions. The program is a matching one whereby two-thirds of the cost is paid by H.U.D. Funds are provided on a one year basis to states and metropolitan planning agencies or councils of governments.

In addition to the work study activities, which provide in-service training for planning agency personnel, the Section 701 program can and does support studies and research undertaken by educational institutions under contract to the states or metropolitan agencies. These activities include such areas as housing, citizen participation, community organization, and some of the more technical aspects of planning such as transportation, utilities, land use, flood-plain zoning, and air facilities.

Again, since it is a matching program, an indication of the ability and willingness of the community college to provide a nonfederal match, either in cash or through in-kind services and facilities, would be advantageous to the college. Community colleges which are interested in pursuing the possibility of participating in the Comprehensive Planning Assistance Program

may obtain additional information from any H.U.D. Regional Office.

The Model Cities Program (authorized by the Demonstration Cities and Metropolitan Development Act of 1966) provides two types of funding to the 150 model cities or neighborhoods selected for participation in the program. The first type of funding is for the planning phase of the program, which at this point is for the most part completed. The second type of assistance is for the plan implementation phase. The funds are made available by H.U.D. to the selected areas on an 80-20 matching basis. However, once the H.U.D. funds are received they become in fact, local dollars for the purpose of matching other federal or state programs.

Many Model Cities plans call for training programs, particularly in such fields as tenant management, community organization, community services, and child care. In addition, many model cities propose to undertake specific studies of community attitudes, existing services and facilities, and community organization so that citizens' wishes, needs, and goals are incorporated into the program's activities. This would appear to be a place where community junior colleges serving the community of the target area could make a contribution and gain insights and understanding, not only of the Model Cities Program and the community, but also of other federal programs and activities in the area.

Community colleges that feel they have expertise of value to the agencies in selected model cities should contact these agencies and learn how they could participate in the program.

The Transition Program

The purpose of the Transition Program is to provide education or skill training to servicemen during their final six months of active duty. The training programs are joint undertakings by both the private and public sectors in cooperation with the Department of Defense.

A number of programs relevant to career opportunities in the public sector are included in the Transition Program. Among these are courses in fish and wildlife management, environmental control technology, air traffic control, law enforcement, corrections, and public works technology. These are some of the public career areas in which community colleges may serve as local contractors.

The administration of the Transition Program is under Manpower and Reserve Affairs, Office of the Assistant Secretary of Defense. The following principles underlie the management of the program:

- Enlisted personnel with less than six months service time remaining are eligible for the program
- The program is offered to military personnel on a voluntary basis
- A major emphasis is given to upgrading basic education
- Training courses are offered which are directly related to job demands
- There is a maximum decentralization of operations to local basis
- On-base facilities are utilized where available
- Personnel are released for training only through local command arrangements
- A counseling program is provided to help individuals plan their future
- Maximum training support is sought from both private and public organizations
- Job referral is an integral part of the program
- Follow-up and evaluation procedures gauge the effectiveness of the program.[57]

Law Enforcement Assistance

Community colleges with interests in law enforcement education should explore the possibility of participation in the program of the Law Enforcement Assistance Administration of the Department of Justice. A heavy emphasis is placed on improved education and training as a means of modernizing the administration of justice. Local and state governments receive financial assistance.

Of particular interest to community colleges is the Law Enforcement Education Program (LEEP). Under the Omnibus Crime Control and Safe Streets Act of 1968 the Law Enforcement Assistance Administration, through its LEEP activities, may provide two types of financial assistance to students. Loans may be awarded to a preservice or inservice student for study in a program which consists of at least fifteen semester hours of courses directly related to law enforcement. And grants may be awarded to an inservice student for full- or part-time study in a program related to law enforcement.

The student receiving a grant must agree to continue work in the employing agency for two years after completing courses paid for under the grant. The employer must certify that the student is a full-time law enforcement officer and that the studies will benefit him on the job. A student receiving a loan must become a certified full-time employee of the law enforcement agency in order to have the loan cancelled. If the student meets this requirement, the loan is cancelled at a rate of 25 per cent per year. Otherwise, loans carry an interest rate and must be paid within a designated period of time. All grants and loans are administered by the college taking part in the program.

U.S. Environmental Protection Agency
Recently created to bring a coordinated thrust against certain ecological problems, the U.S. Environmental Protection Agency is an independent agency within the Executive Branch. A number of programs previously administered by various agencies fall within the scope of the Environmental Protection Agency. The Agency has absorbed the following:[58]

1. The Federal Water Quality Administration from the Department of the Interior

2. The National Air Pollution Control Administration from the Department of Health, Education, and Welfare

3. Parts of the Environmental Control Administration (Bureaus of Solid Waste Management, Water Hygiene, and a portion of the Bureau of Radiological Health), also from H.E.W.

4. The pesticides research and standard setting program of the Food and Drug Administration, H.E.W.

5. The pesticides registration authority of the Department of Agriculture

6. Authority to perform general ecological research, from the Council on Environmental Quality

7. Certain pesticide research authorities of the Department of Interior

8. The environmental radiation protection standard setting function of the Atomic Energy Commission

9. The functions of the Federal Radiation Council.

Within the scope of these consolidated operations, there are various programs that may be of interest to community colleges. For instance, the Water Quality Improvement Act of 1970, which amends the Federal Water Pollution Control Act, authorizes several programs of financial support.

Institutions of higher education may apply for grants or contracts if they are preparing undergraduate students to enter occupations which involve the design, operation, and maintenance of treatment works and other facilities whose purpose is water quality control. Grants or contracts may include payment of all or part of the cost of the programs or projects, such as planning for the development or expansion of programs to train persons to operate and maintain treatment works; training and retraining faculty members; conducting short term or regular session institutes for persons teaching or preparing to teach students who will operate and maintain treatment works. Projects carrying out innovative and experimental programs of cooperative education involving alternate periods of full-time academic study at the institution and periods of full-time or part-time employment involving the operation and maintenance of treatment works are also eligible. So too are research programs focusing on methods of training students or faculty, including the preparation of teaching materials and the planning of curriculum.

There are also scholarships available for undergraduate study in approved programs by persons preparing for an occupation involving the operation and maintenance of treatment works. Emphasis is to be placed upon attracting recent graduates of secondary schools to enter these programs.[59]

Similar programs are authorized under the Clean Air Act and related legislation. Air pollution manpower training grants and contracts should be explored by community colleges with delivery capabilities in this area.[60]

Institutions interested in participating in environmental manpower training and education programs should correspond with the Environmental Protection Agency or contact their state and local pollution control agencies.

U.S. Department of Transportation
With the congestion of our streets, highways, and

skies becoming a major concern of the nation, the U.S. Department of Transportation has taken the leadership to develop several programs in which community colleges might be involved at the local level.

Under the Urban Mass Transportation Act of 1964, grants are made to finance operating costs of training manpower and conducting research related to solving urban transportation problems. Colleges interested in exploring the possibilities under this legislation should contact the Urban Mass Transportation Administration, U.S. Department of Transportation.

The Federal Aviation Administration is interested in working with community colleges through its aviation education program. Community colleges should explore the feasibility of preparing personnel for employment in such shortage occupations as air traffic control. Information may be obtained from the Special Assistant for Aviation Education, Office of General Aviation Affairs, Federal Aviation Administration, U.S. Department of Transportation.

A number of programs related to highway safety are authorized by the Federal Highway Safety Act of 1966 and the National Traffic and Motor Vehicle Safety Act of 1966. Community colleges should explore the training implications of such programs as alcohol counter measures, accident site cleanup, emergency medical services, police traffic services, motor vehicle inspection and administration, and driver education and licensing. Information concerning manpower needs of state and local governments to implement the highway safety programs is available from the National Highway Traffic Safety Administration, U.S. Department of Transportation. For information concerning the highway safety programs of particular states, colleges may contact the Governor's Highway Safety Coordinator in their respective states.

Agencies and the Community Colleges

One of the most difficult tasks facing the community college is that of penetrating the maze of the governmental structure. To have effective educational programs to prepare students for careers in public agencies, it is imperative that the college achieve sound working relations with the governmental agencies represented in the community served by the college. This is important not only to establish need for programs and for placement of graduates into employment, but perhaps of greater importance, to obtain financial support that may be available.

The following suggestions may improve relations with governmental agencies:

1. Analyze the ordinance or legislation giving the authority underlying the establishment of the government agency.
2. Study the order of priorities in the agency.
3. Analyze the priorities of the college.
4. Identify which of the college priorities fit the agency priorities.
5. Document how the college priorities mesh with the priorities of the agency.
6. Identify the key decision maker in the agency who has the responsibility for priorities of interest to the college.
7. Explore the possibilities of participation in the agency's programs.
8. Demonstrate the capability of the college to assist the agency in fulfilling its priorities.
9. Solicit a contractual arrangement between the college and the agency.
10. Involve representatives of the agency in early phases of planning prospective programs.
11. Implement the delivery of contracted services with a maximum of effectiveness.
12. Involve representatives of the agency in evaluation of the program and in the follow-up of graduates from the program.

These measures should result in better working relations between the college and the operating agencies. Needless to say, once channels of cooperation are opened, continued cooperation will be dependent upon effective delivery of services by the college.

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[53] Staff of Representative William V. Roth. *1969 Listing of Operating Federal Assistant Programs.* Washington, D.C.: U.S. Government Printing Office, 1969. p. v.

[54] U.S. Department of Labor, Manpower Administration. *Public Service Careers Program: A General Description.* Washington, D.C.: U.S. Government Printing Office, August 1969.

[55] Office of Economic Opportunity. *Applying for a CAP Grant.* Washington, D.C.: U.S. Government Printing Office, August 1968.

[56] Letter to Andrew S. Korim from James R. King, U.S. Office of Economic Opportunity, dated February 19, 1971.

[57] U.S. Department of Defense, Office of the Assistant Secretary of Defense. *Transition Program.* Washington, D.C.: U.S. Government Printing Office, May 1969.

[58] U.S. 91st Congress, 2nd Session, 91-366. *Message from the President of the United States Relative to Reorganization Plan Numbers 3 and 4 of 1970.* Washington, D.C.: House of Representatives; July 9, 1970.

[59] U.S. House of Representatives, Committee on Public Works. *Laws of the United States Relating to Water Pollution Control and Environmental Quality.* Washington, D.C.: U.S. Government Printing Office, July 1970. pp. 68-71.

[60] U.S. Department of Health, Education, and Welfare; Public Health Service. *Grants for Training Projects—Policy Statement.* Washington, D.C.: U.S. Government Printing Office, 1967. 40 pp.

8 The Future

If the mood of Congress, as expressed in the many pieces of legislation, is a measure of the public's interest in the improvement and expansion of government services, then a critical shortage of public employees is forthcoming. Congress, through the Intergovernmental Personnel Act of 1970, has set the stage for local and state governments to embark upon a dramatic campaign to improve the quality of people working in government. From all indications, a huge investment to educate and train people for government careers is in the formative stages.

If this mood of Congress is a signal of what is ahead, then the role of community colleges in preparing people for government careers is likely to be reinforced. Already, many community colleges have begun to respond. It can be predicted that in the near future the more than 80,000 governments will turn increasingly to the more than 1,000 community colleges to find the people needed to improve the delivery of government services.

A number of challenges face community colleges and government agencies as the education and training of present and prospective employees is strengthened. In preceding chapters, strategies for coping with some of these challenges have been offered. The proliferation of programs can be reduced by the grouping of eight major career families of public service occupations. A strong plea is made to structure educational programs for these families on a base of elements common to all families of government careers.

Some cautions regarding labor market data are presented. Although an attempt is made to give some measures of generalized manpower needs in specific career families, hard data appropriate to associate degree programs is less than complete.

Community colleges would do well to consider the format for a two-year program leading to an associate degree which is offered in this publication. The format permits career families and the specific occupations to be treated as options within the total spectrum of employment opportunities in government. Within this framework, certificates of completion may be granted in recognition of work completed (though somewhat short of the total requirements for the associate degree). Local modifications in the format may need to be made to accommodate the limiting and permissive factors facing a particular college.

A strong emphasis is given to the design of courses meant specifically to prepare the middle-level entrant, with skills needed to make him productive immediately. Colleges and government agencies must work hand in hand to build learning experiences appropriate to tasks performed in government. Too often the statement is made that there is no difference between working in government and working in a private corporation. This misconception must be overcome if we are to improve the operations of government.

Furthermore, a case is presented for building an integrated delivery capability for public service career education, which may, in fact, apply to all occupational education programs in community colleges. Without burdening the reader excessively with the jargon of the systems approach, systems concepts are suggested as useful guides to improve the educational services of the college. Concern for accountability demands improved management of educational services. Guides are offered to help extend the reach of the college back into the early phases of education, out into the community, and forward into the labor market. Efforts must be made to structure the activities of the institution into a well integrated continuum.

Without doubt, educating people for government careers is the new frontier of occupational education. Opportunities and methods for linkage with local, state, and federal governments' activities are reviewed in this publication. Community colleges must seize opportunities for involvement. The challenge is there, and the trends favor community-oriented institutions. Only by well-planned, aggressive action will local colleges be able to develop the services needed to prepare an improved corps of government civil servants.

The creativity of the elderly can be tapped and made tangible with the help of a therapist.

Appendices

Appendix A

AIR TRAFFIC CONTROLLER: SUGGESTED AREAS OF STUDY

Appropriate junior college courses for people who might wish to become air traffic controllers and computer programmers are:

1. *Mathematics*
   - Integral Algebra
   - Vector Analysis
   - Boolean Algebra
2. *English*
   - Basic College
   - Report Writing
3. *Geography*
   - Land Forms
     - Settlement Patterns
     - Transportation Systems
     - Meteorology
     - Political Divisions
   - Adjustments to Geographical Imperatives
     - Population Transport Systems
4. *Economics*
   - Micro Economics
   - Transport Economics
5. *Communication Systems*
   - Radio Theory
   - Radar Theory
   - Voice Training
6. *Computer Systems*
   - Computer Theory
7. *Aviation History*
   - CAA/FAA
   - Airports
   - Aircraft
   - Aviation interest
   - NAS
8. *Transportation History*
   - Rail, Highway, Marine
   - Air
9. *Public Administration*
   - Governmental Process

Source: "Aviation Curricula at Colleges and Universities," *Aviation Education.* (Federal Aviation Administration, U.S. Department of Transportation, March 1970), p. 18.

Appendix B

SUGGESTED SEQUENCE OF STUDY: CHILD CARE CAREERS

First Semester Courses	*Credit hours*
English Composition	3
Natural Science	3
Physical Education	1
Child Growth and Development	4
Introductory Creative Activities	2
Literature for Young Children	3
General Orientation to Participation with Children	non-credit
	16

Second Semester Courses	*Credit hours*
Speech	2
Advanced Child Growth and Development	4
Observing and Recording Child Behavior	3
Music for Young Children	3
General Sociology	3
Creative Activities	2
	17

Third Semester Courses	*Credit hours*
General Psychology	3
History elective	3
Supervised Student Participation	3
Community Relationships	2
Elective (General Education)	5–6
	16–17

Fourth Semester Courses	*Credit hours*
Supervised Student Participation	3
Social Problems	3
Family Relationships	3
Child Nutrition and Health Care	2
Elective (General Education)	4–5
	15–16

Source: U.S. Office of Education, *Child Care and Guidance: A Suggested Post High School Curriculum* (Revised) (U.S. Government Printing Office, June 1970), p. 10.

Appendix C

CAREER-ORIENTED ASSOCIATE DEGREE CURRICULUM IN CORRECTIONS

FIRST YEAR

First Semester

Communication Skills
Crime and Delinquency
Introduction to Corrections
Government (national)
Sociology

Second Semester

Communication Skills
Administration of Criminal Justice
Psychology
Government (state and local)
Social problems

SECOND YEAR

First Semester

Essentials of Interviewing
Principles of Correctional Administration
Elective in Police Science (criminal law)
Public Speaking
Institutional Procedures, Jails and Detention

Second Semester

Group and Individual Counseling
The Court System
Correctional Services in the Community
Probation, Pardons, and Paroles
Field Work Experience

Source: Vernon B. Fox, *Guidelines for Corrections Programs in Community and Junior Colleges* (Washington, D. C.: The American Association of Junior Colleges, 1969), p. 26.

Appendix D

A SUGGESTED CURRICULUM PATTERN
FIRE SCIENCE ASSOCIATE DEGREE
PROGRAM

Professional Courses	*Semester hours*
Fire Protection (introduction)	3
Fire Suppression (introduction)	3
Fire Prevention (introduction)	3
Fire Protection Systems	3
Fire Fighting Tactics and Strategy	3
Building Construction	3
Hazardous Materials	3
Fire Hydraulics and Equipment	3
Electives	6
	30

General Courses	*Semester hours*
Communication Skills (written-oral)	6
Mathematics (algebra)	6
Science (physics-chemistry)	6
Psychology (general)	3
Sociology	3
American Government (local, state, national)	3
Elective	3
	30

Source: Donald F. Favreau, *Guidelines for Fire Service Education Programs in Community and Junior Colleges* (Washington, D. C.: The American Association of Junior Colleges, 1969), p. 28.

Appendix E

SUGGESTED LAW ENFORCEMENT
CURRICULUM

FIRST YEAR

First Term

English	3
Psychology (introduction)	3
State and Local Government	3
Introduction to Law Enforcement	3
Police Administration	3
Physical Education	1
	16

Second Term

English	3
National Government	3
Sociology (introduction)	3
Police Operations	3
Police Role in Crime and Delinquency	3
Physical Education	1
	16

SECOND YEAR

Third Term

Humanities	3
Criminal Law	3
Mathematics	3
Criminal Investigation	3
Public Speaking	3
Physical Education	1
	16

Fourth Term

Adolescent Psychology or Social Problems	3
Logic	3
Criminal Evidence and Procedure	3
Introduction to Criminalistics	3
Elective	3
Physical Education	1
	16

Source: Thompson S. Crockett and James D. Stinchcomb, *Guidelines for Law Enforcement Education Programs in Community and Junior Colleges* (Washington, D. C.: The American Association of Junior Colleges, 1968), p. 18.

Appendix F

PROGRAM OF STUDY: RECREATION LEADERSHIP

FIRST YEAR *First Semester*	*Class hours*	*Laboratory hours*	*Suggested credit hours*
Communication Skills (written)	3	0	3
Natural Science I	3	2	4
Introduction to Recreation Services	3	0	3
Arts and Crafts	0	4	2
Team Sports	0	4	2
Drama	0	4	2
	9	14	16
Second Semester			
Communication Skills (oral)	3	0	3
Introduction to Sociology	3	0	3
Humanities	3	0	3
Social Recreation	2	2	3
Individual Lifetime Sports	0	4	2
Field Work I	1	6 (variable)	2
	12	12	16
SECOND YEAR			
Third Semester			
Introduction to Psychology	3	0	3
Group Leadership	3	0	3
Outdoor Recreation	2	2	3
Music	0	4	2
Field Work II	1	6 (variable)	2
Elective	3	0	3
	12	12	16
Fourth Semester			
Natural Science II	3	2	4
Program Planning and Organization	3	0	3
Water-related Sports	0	4	2
Folk, Square and Social Dance	0	4	2
Field Work III	1	6 (variable)	2
Elective	3	0	3
	10	16	16

Source: U.S. Office of Education, *Recreation Program Leadership: A Suggested Two-Year Post High School Curriculum* (U.S. Government Printing Office, 1969), pp. 17-18.

Appendix G

TEACHER AIDE CURRICULUM: ONE EXAMPLE

FIRST YEAR *First Semester*	*Semester hours*	*Lecture*	*Lab*	*Clock hours*
Applied Communications I *or* English Composition I	3	3	0	54
Psychological Development I	3	3	0	54
Basic Instructional Media	4	3	2	90
Educational Processes	3	3	0	54
Fine Arts Survey I	1	0	3	54
Freshman Orientation	1	1	0	
Basic Physical Education	1	1	2	
	16			306
Second Semester				
Applied Communications II *or* English Composition II	3	3	0	54
Psychological Development II	3	3	0	54
Instructional Media Production	4	2	4	108
The Disturbed Child	3	3	0	54
Library Practice I	3	3	0	54
Fine Arts Survey II	1	0	3	54
Physical Education Activity	1	0	3	
	18			378
SECOND YEAR				
First Semester				
The American Political System	4	3	2	90
Introduction to Sociology *or* History of Selected Minority Cultures in the United States	3	3	0	54
School Procedures	3	3	0	54
Basic Art for Classroom Teachers I	3	2	4	108
Fundamentals of Typewriting	3	3	0	54
	16			360
Second Semester				
Teacher Assistant Internship	8	2	12	252
Teacher Assistant Seminar	3	3	0	54
The Learning Process	3	3	0	54
	3	3	0	54
	17			414
TOTAL SEMESTER HOURS	67			
TOTAL CLOCK HOURS				1458

Source: "Teacher Aide Program," Tarrant County Junior College District, Fort Worth, Texas, March 1970.

Appendix H

TRAFFIC ENGINEERING TECHNOLOGY CURRICULUM

FIRST YEAR *First Semester*	*Class hours*	*Lab hours*	*Semester credit*
Introduction to Traffic Engineering	1	3	2
Engineering Drawing	1	6	3
Technical Mathematics I	4	0	4
Technical Physics I	3	3	4
Communication Skills	3	0	3
Physical Education	0	2	1
	12	14	17
Second Semester			
Principles of Traffic Administration and Safety	2	0	2
Graphics	1	6	3
Technical Mathematics II	4	0	4
Technical Physics II	3	3	4
Communication Skills	3	0	3
Physical Education	0	2	1
	13	11	17
SECOND YEAR			
Third Semester			
Field Traffic Surveys	3	3	4
Control Devices	3	0	3
Geometric Design	3	3	4
Statistics	3	0	3
Social Science (government, society) elective	3	0	3
	15	6	17
Fourth Semester			
Traffic Studies	3	3	4
Traffic Laws and Regulations	3	0	3
Urban Transportation Planning	3	3	4
Data Processing	2	3	3
Social Science (government, society) elective	3	0	3
	14	9	17
Totals	54	40	68

Source: Adrian H. Koert, *Traffic Engineering Technician Programs in the Community College* (Washington, D. C.: The American Association of Junior Colleges, 1969), pp. 20-21.

Appendix I

COMMUNITY SERVICES TECHNICIAN: AN APPROACH

General Education Core	*Supportive Social Sciences*	*Social Service Technical Core*
Orientation	Social Problems	Community Service Field Experience* (2 semesters)
Statistics or Math Elective	Social Welfare as an Institution	Interviewing Skills
Freshman Composition and Writing Skills	Three or Four Electives from:	Group Leadership Skills
Biology or Science Elective	The Family	Social Change Skills
Health and Physical Ed (2 semesters)	Abnormal Psychology	
English Literature	Black Culture in America	
American Government	Psychology of Children	
General Psychology	Psychology of Adolescence	
Principles of Sociology	The Culture of Poverty	
Principles of Economics	Juvenile Delinquency	
Humanities (2 semesters)	Racism	
Public Speaking	State and Local Government	
	Sociology of Organization	
32-34 credits	16-18 credits	14-16 credits

* Four hours per week in field; one hour per week in seminar.

Source: The Council on Social Work Education, *The Community Services Technician—Guide for Associate Degree Programs in the Community and Social Services* (New York, New York: The Council, 1970), p. 21.

Appendix J

POLLUTION ABATEMENT PROGRAM: AN EXAMPLE

Outline of Curriculum

First Semester	*Credit hours*
Introduction to Environmental Health Technology	3
English (Rhetoric)	3
Applied Mathematics I	4
Fundamental Principles of Chemistry I	4
General Biology	3
	17
Second Semester	
Wastewater Operations	3
Applied Mathematics II	4
Public Speaking	3
Fundamental Principles of Chemistry II	4
Aquatic Ecology and Water Pollution	3
	17
Third Semester	
Microbiology	4
Technical Report Writing	3
Sanitary Chemistry	3
Pollution Abatement Seminar	1
Fundamental Principles of Physics I	5
	16
Fourth Semester	
Environmental Technical Laboratory	4
Fundamental Principles of Physics II	5
Structure and Economics of Governmental Agencies	3
Physical Fitness in Water Operations	2
Tech Electives	3
Industrial Waste Control and Management Solid Waste Management and Macropollution	
	17
Summer Semester (optional)	
Experimental Ecology	6
Instrumentation Laboratory	3
	9

Source: Charles County Community College, La Plata, Maryland.

Appendix K

LIBRARY TECHNOLOGY: AN EXAMPLE

First Quarter	*Credit hours*
Library Usage	3
Introduction to Library Organization	3
Occupational Communication	3
Typing	3
Psychology of Personal Development	3
	15
Second Quarter	*Credit hours*
Introduction to Technical Services	3
Occupational Communication	3
Typing	3
Mathematics Elective	3
Introduction to Data Processing	3
	15
Third Quarter	*Credit hours*
Introduction to Circulation and Reference	3
Speech	3
Basic Design	3
Clerical Recordkeeping and Accounting	3
Cooperative Work Experience	3
	15
Fourth Quarter	*Credit hours*
Library Technician Graphics	3
Fundamentals of Economics	3
Key Punch Laboratory	3
Human Relations in Business and Industry	3
Cooperative Work Experience	3
	15
Fifth Quarter	*Credit hours*
Information Techniques and Systems	3
Business Science Information	3
Office Practice	3
Business Machines	3
Introduction to Unit Record Equipment	3
Cooperative Work Experience	3
	18
Sixth Quarter	*Credit hours*
Advanced Information	3
Literature for Children	3
Computer Programming Fundamentals	5
Cooperative Work Experience	3
	14

TOTAL CREDIT HOURS: 92

Source: General Catalog, Community College of Denver, North Campus, Denver, Colorado.

Appendix L

URBAN PLANNING TECHNOLOGY: AN EXAMPLE

First Quarter	*Credit hours*
English	
Essentials of Written Communication or College Composition	3
Urban Planning Technology	
Introduction to Urban Planning Technology	3
Applied Quantitative Methods	3
Introduction to Graphic Presentation	3
Basic Cartography	3
Physical Education or Health (See Specific Graduation Requirements)	1
	16

Second Quarter	*Credit hours*
English	
Essentials of Written Communication or College Composition	3
Urban Planning Technology	
Basic Planning Processes	3
Data Collection and Synthesis	3
Graphic Presentation	3
Simulated Work Experience	3
Physical Education or Health (See Specific Graduation Requirements)	1
	16

Third Quarter	*Credit hours*
Speech	
Fundamentals of Oral Communication	4
Urban Planning Technology	
Program Effectuation	3
Contemporary Planning Processes	3
Intermediate Graphic Presentation	3
Simulated Work Experience	3
Physical Education or Health (See Specific Graduation Requirements)	1
	17

Summer Session (Optional)	*Credit hours*
Urban Planning Technology	
Cooperative Field Experience+	5

(Note: Satisfactory completion of the preceding course sequence will earn a Certificate of Skills in Urban Planning Technology.)

Fourth Quarter	*Credit hours*
Urban Planning Technology	
Seminar in Urban Problem Research	3
Social Science	
Introduction to Social Science*	3
Political Science	
American National Government	4
Speech	
Group Discussion	4
Economics	
Economics for Business and Industry*	3
	17

Fifth Quarter	*Credit hours*
Urban Planning Technology	
Seminar in Urban Projects	3
Social Science	
Introduction to Social Science*	3
Geography	
Elements of Physical Geography or Economic Geography*	4
Mathematics	
Algebra or 690-095 Algebra*	3
Political Science	
State and Local Government	4
	17

Sixth Quarter	*Credit hours*
Urban Planning Technology	
Seminar in Supervising Urban Tasks	3
Social Science	
Introduction to Social Science*	3
Sociology	
Introductory Sociology*	4
Elective	
(See Specific Graduation Requirements)	6
	16

* Cooperative Field Experience is optional for the Associate in Science degree.

Source: Catalog for 1970-71, Cuyahoga Community College, Cleveland, Ohio.